

VOLUME PRICE 30 CENTS NUMBER

37

4

# THE INLAND PRINTER

*J. L. Schomer*



JULY

1906

DAVE BARTER

SEND FOR OUR NEW BOOK OF  
Samples of Specialties in

# COVER PAPERS

Sea Wave, Centurion and Repoussé

Made in three styles, in twenty-four colors, in 21 x 33, 60 and 80 lb. These papers are made only by ourselves and show very attractive two-color effects, making them unique for Advertising Announcements, Booklet Covers, Fancy Stationery and similar uses : : : : : :

OUR OTHER SPECIALTIES ARE

**VELLUM and SATIN TINTS**

In fifteen colors, 21 x 33, 60 and 80 lb.

**ONION SKIN BOND**

In Folio, Royal and Double Cap

**HALF-TONE WRITING**

In 17 x 22, 19 x 24 and 17 x 28

**Keith Paper Co.**

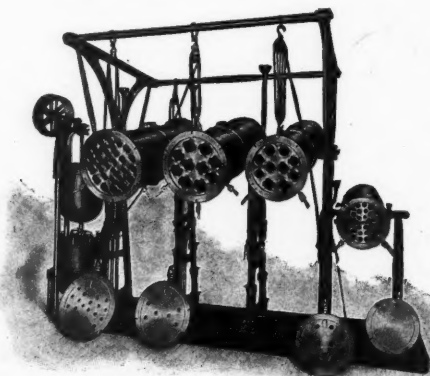
TURNERS FALLS - MASSACHUSETTS

FULL EQUIPMENTS OF THE LATEST AND  
MOST IMPROVED

## Roller-Making Machinery

FURNISHED

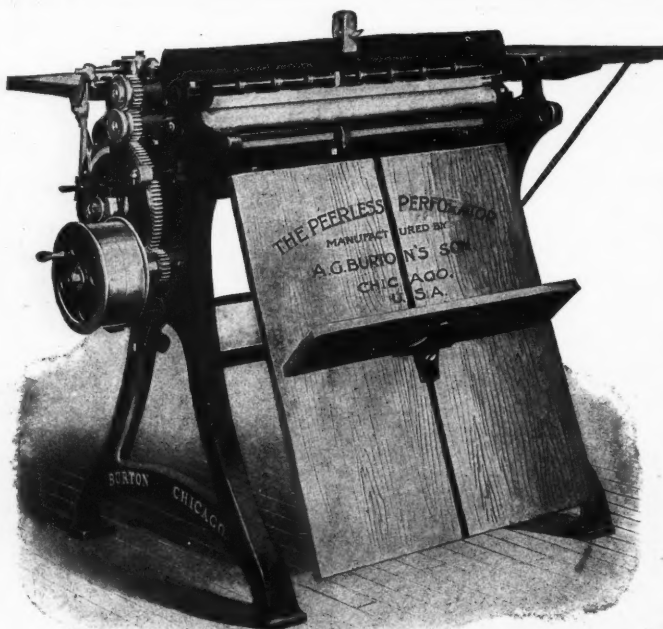
ESTIMATES FOR LARGE OR SMALL OUTFITS



**JAMES ROWE** 241-247 S. Jefferson St.  
CHICAGO, ILL.

LINOTYPE & MACHINERY COMPANY, Ltd., European Agents,  
189 FLEET STREET, LONDON, ENGLAND.

## THE PEERLESS PERFORATOR



It is distinguished for the rapidity and perfection of its work, makes a clean and thorough perforation at a high rate of speed, and is adjustable to a wide range in the thickness of the stock it will perforate.

### SELLING AGENTS

E. C. FULLER CO. . . . .	NEW YORK, N. Y.
GANE BROS. & CO. . . . .	CHICAGO, ILL.
T. W. & C. B. SHERIDAN . . . . .	CHICAGO, ILL.
THE J. L. MORRISON CO. . . . .	TORONTO, ONT.
T. W. & C. B. SHERIDAN . . . . .	LONDON, ENG.
S. KOCHANSKI . . . . .	BERLIN, GERMANY
MIDDOWS BROS. . . . .	SYDNEY, N. S. W.

### Manufactured by

**A. G. BURTON'S SON**  
42 to 48 South Clinton Street  
CHICAGO, ILL., U. S. A.

E. C. FULLER CO., 28 Reade St., NEW YORK	} Sole Eastern Agts.
THE J. L. MORRISON CO., Sole Agents for Canada	



# LINEN FINISH BOND PAPERS



AMBASSADOR  
ALEXANDRA



BRO. JONATHAN  
REGISTER

## LUXURIES

eventually become necessities, whereupon ways are found to produce different qualities to satisfy all demands.

### LINEN FINISH BOND PAPER

is accessible to all as a necessity, for it is now made in several grades, to meet the practical demands of commerce. The most complete line, covering all needs of whatever nature, is the "Butler Brands—from the cheapest that's good to the best that's made."

"REGISTER"—for general and circular letters

"AMBASSADOR"—for extensive business use

"BROTHER JONATHAN"—the standard of America

"ALEXANDRA"—the queen of correspondence

MADE IN  
POPULAR SHADES

Send for Samples and Price-List  
of this excellent line

W. BUTLER PAPER CO. CHICAGO.

**RELIABLE**  
**Printers' Rollers**  
**FOR**  
**Summer Use**



**Sam'l Bingham's Son**  
**Mfg. Co.**

**FACTORIES**

**CHICAGO**

195-207 South Canal Street

**PITTSBURG**

First Avenue and Ross Street

**ST. LOUIS**

21-23 South Third Street

**KANSAS CITY**

Fourth and Broadway



A satisfied customer is the strongest link  
in the chain that holds your trade.

A satisfied customer is the most potent  
factor in the building of new trade.

---

Your customers come under two general heads. There's the man who asks a half dozen printers for an estimate, and gives the job to the lowest bidder, regardless of the quality of work he will get.

Perhaps Old Hampshire Bond would appeal to that man and help him to appreciate better things, but it is just possible that he wouldn't know it from manila wrapping.

The second class consists of discriminating buyers who realize the commercial value of the artistic and the good, and are willing to pay a reasonable price to get it. They buy their printing intelligently. They know that a cut in price means a cut in workmanship.

These are the people who make the printing business worth while, and they are the people for whom Old Hampshire Bond is made—"a little better than seems necessary."

We suggest that you talk Old Hampshire Bond to those of your customers who know how to appreciate good things, because, if you don't, perhaps, day after to-morrow, Jones, the other printer, will, and then it will be too late.

## Hampshire Paper Company

*We are the only Paper Makers in the world making Bond Papers  
exclusively*

South Hadley Falls, Mass.



***The New York Office of Oswego Machine Works has just been opened at 150 Nassau St., with Mr. Walter S. Timmis as Manager.***

Mr. Timmis' long and varied experience with the highest grades of machinery insures the most careful attention to any of the finer requirements of cutting.

**W**HEN we advertised a few years ago "Difficult Propositions Desired," we got them, and *were glad to*. Any one can do the easy jobs. Only a few can do the hard ones well. Only one line of cutting machines fulfils all the present exacting requirements of the progressive handlers of paper and printing, and that is the BROWN & CARVER and OSWEGO complete line of *sixty* sizes and styles. Everything from the 16-inch Bench Cutter to the 9-ton Automatic Clamp Cutting Machine (each with one, two or three points of excellence on no other) is generally kept in stock for instant shipment at Oswego.



THE BROWN & CARVER AUTOMATIC CLAMP CUTTER,  
IS A TRIPLER OF PRODUCTION

**OSWEGO MACHINE WORKS** MAIN OFFICE AND WORKS  
OSWEGO, N. Y.

NIEL GRAY, JR., Proprietor

NEW YORK OFFICE, 150 Nassau Street  
WALTER S. TIMMIS, Manager

CHICAGO OFFICE, 277 Dearborn Street  
J. M. IVES, Manager



# Hamilton —the name that stands for QUALITY

*in Printing-office Furniture.*

WE ORIGINATE — Others may attempt to Follow and Imitate our Designs, but our Quality has never been Imitated.  
SEND FOR OUR CATALOGUES

## Creighton Standing-Galley Shelving.

THIS new shelving represents a most economical idea for a crowded office. It makes waste space available. The shelves when fastened to a wall or partition project only  $6\frac{1}{4}$  inches. Built any length desired and sold by the running foot. The shelving can be fastened to wood partitions or to brick walls. Only brackets and shelving are required for wood partitions. For brick partitions hardwood uprights should be used, on which the brackets are fastened, and the uprights can be screwed to the brick walls, the screws being fastened into wood plugs set into the brick. Any vacant wall space can be used and converted into valuable storage space for standing ads., jobs under way, electrotypes or book pages. Pages 9 inches long can be accommodated, with heading to the front, and every line will be easily accessible for correction. The galley shelves are furnished either of hardwood or soft wood. The soft-wood shelving is for drying Simplex type and can be divided, when required, into column widths.

In a wall space 6 feet long by  $5\frac{1}{2}$  feet high from fifty to sixty pages 7 by 9 can be stored, taking up only 6 inches of space from the wall, and every line of type will be in plain sight, and in a position for alteration. The brackets are of cast iron, enameled, drilled for screws and ready for adjustment. The hardwood uprights are drilled for screws to fasten to the wall and also for brackets properly spaced. It is an easy matter to put the shelving in place. In ordering brackets for long lengths, about one bracket should be figured for each three feet of shelving, taking into consideration the end brackets. Thus, three brackets would be required for a 6-foot length. When in place, each shelf takes up a perpendicular space of 9 inches. A series of seven shelves will therefore occupy 63 inches, with an addition of about 2 inches at each end of uprights.



### PRICE-LIST.

Brackets per pair, including screws, - - - - -	75c.
Hardwood shelving, any length, per running foot, - - - - -	35c.
Soft-wood shelving for Simplex type, any length, per running foot, - - - - -	30c.
Extra for dividing shelving lengthwise, into 13-em columns or wider, per running foot, -	10c.
Uprights for brick walls, size $1\frac{1}{4}$ x 3 x 65 inches, bored for wall-screws and brackets, each,	75c.

The price of the uprights includes heavy screws for fastening into brick walls. Uprights should be spaced about 36 inches apart.

Weight of brackets, per pair, 6 lbs. Weight of upright, 7 lbs. Weight of shelving per running foot,  $2\frac{1}{4}$  lbs.

*All prices are subject to the usual regular and quantity discounts.*

Manufactured exclusively by

HAMILTON GOODS  
are carried in stock and  
for sale in all first-class  
printers' supply houses.



## THE HAMILTON MFG. CO.

Main Office and Factory, . . . . . TWO RIVERS, WIS.

Eastern Office and Warehouse, . . . . . RAHWAY, N. J.

A VALUABLE LINE GAUGE MAILED FREE TO ANY PRINTER WHO WILL ASK FOR IT



# The Automatic Typecaster } Pays for itself in about a year

The following table shows the average nine hours' output of the Automatic Typecaster, and the cost per pound compared with the prevailing NET prices per pound charged by type foundries.

¶ In figuring the cost of the product of the Automatic Typecaster, metal was charged at 14 cents per pound (a high figure), operator at \$2.50 per day, gas and power at 50 cents per day, wear and tear and interest on investment at \$1.00 per day.

Cost of Type, nine sizes, when cast on the AUTOMATIC TYPECASTER				Cost of same quantity of Type at prevailing TYPEFOUNDRY NET PRICES					
Point Body	Daily Output in lbs.	Cost per lb.	Total Cost	1st Class Prices		2d Class Prices		2d Class Special Prices	
				Per lb.	Total Cost	Per lb.	Total Cost	Per lb.	Total Cost
6	15	\$0.40 $\frac{2}{3}$	\$6.10	\$0.61	\$ 9.15	\$1.10	\$16.50	\$1.22	\$18.30
8	20	.34	6.80	.50	10.00	.85	17.00	.95	19.00
10	25	.30	7.50	.44	11.00	.70	17.50	.78	19.50
12	30	.27 $\frac{1}{3}$	8.20	.40	12.00	.62	18.60	.70	21.00
14	36	.25 $\frac{1}{9}$	9.04	.38	13.68	.58	20.88	.66	23.76
18	42	.23 $\frac{1}{2}$ $\frac{1}{1}$	9.88	.38	15.96	.57	23.94	.62	26.04
24	48	.22 $\frac{1}{3}$	10.72	.38	18.24	.53	25.44	.60	28.80
30	54	.21 $\frac{1}{2}$ $\frac{1}{4}$	11.56	.38	20.52	.53	28.62	.59	31.86
36	60	.20 $\frac{2}{3}$	12.40	.38	22.80	.53	31.80	.59	35.40

The difference in the cost of nine days' output of the Automatic Typecaster, compared with foundry prices, is as follows:

Compared with foundry first-class prices, the difference in favor of the user of the Automatic Typecaster is . . . . .	<b>\$ 51.15</b>
Compared with foundry second-class prices, the difference in favor of the user of the Automatic Typecaster is . . . . .	<b>118.08</b>
Compared with foundry second-class special prices, the difference in favor of the user of the Automatic Typecaster is . . . . .	<b>141.46</b>

EVERYTHING FOR THE ELECTROTYPYER	EVERYTHING FOR THE STEREOTYPYER	EVERYTHING FOR THE PHOTO-ENGRAVER	Composing-room Equipments Pressroom Equipments
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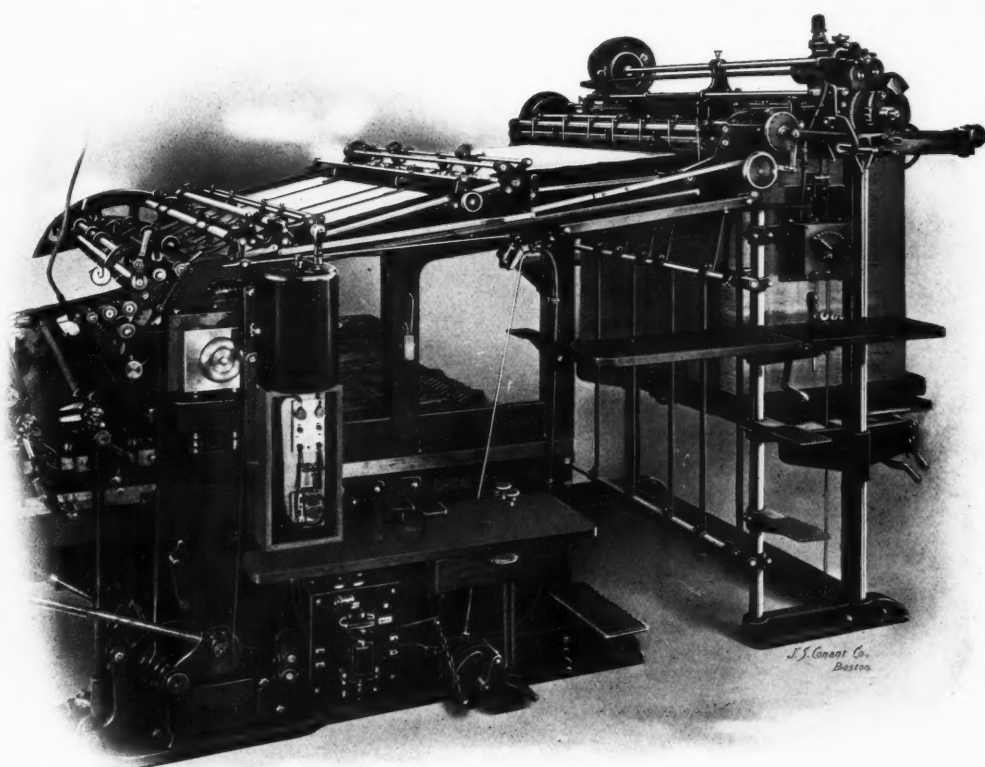
## United Printing Machinery Company

BOSTON  
246 Summer Street

NEW YORK  
12-14 Spruce Street

CHICAGO  
337-339 Dearborn Street





**T**HE PILE FEEDER shown above represents our latest feeder of this type. We advocate our Continuous Feeder as being better adapted to general pressroom conditions, but the principle of control and separation is identical in both machines, and in those places where the pile style is suited the certainty of separation—positive control of sheet and accurate register—of the Cross Pile Feeder places it in the same class as our Continuous Feeder.

---

## CROSS PAPER FEEDER CO.

Main Office, 185 Summer Street, BOSTON

New York Office, . . . . 38 Park Row

MANUFACTURERS OF PAPER-FEEDING MACHINERY EXCLUSIVELY



By the aid of

# Uncle Sam

we are enabled to attend to your wants as  
handily as if we were located in your own city.

The United States, by its force of postal employees — the binding contracts with each and every railroad — furnishes a most efficient system of conveying mail.

We are located in the hub of the Western States; our mail and express service are excellent; one night will bring your requests to our notice; no time lost; we have every facility for turning out first-class work in every department, and we do *that very same thing* every day—*first-class work*.

We want your business — be it but a dollar a year.

We want to get in touch with every periodical (daily, weekly, monthly) that is printed in the West — with every user of designing, engraving and printing.

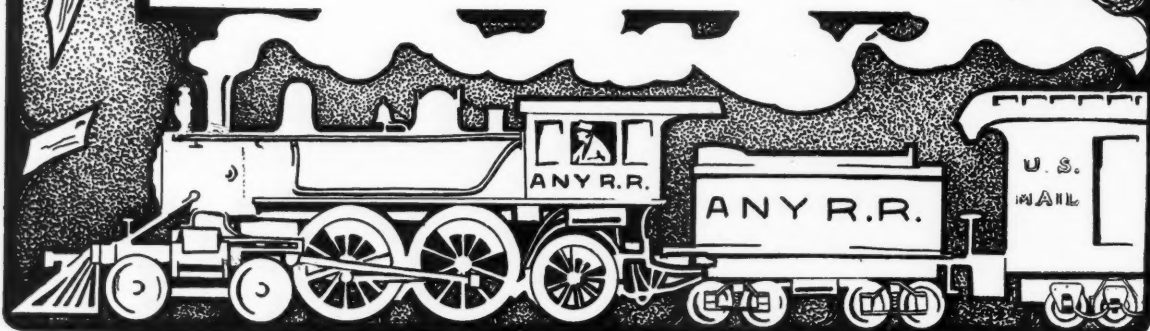
*Our Cuts Talk* —Let them say a few words for you.

**The Williamson-Haffner Company**  
DESIGNERS — ENGRAVERS

**The United States Colortype Company**  
GENERAL PRINTERS

(ALL UNDER ONE MANAGEMENT)

DENVER







QUEEN CITY INK  
FOR  
Working Qualities

Copyrighted 1906  
A. L. Jansson

H. D. BOOK, 40.    DARK BRONZE BROWN, 3506.    JACQUEMINOT, 636.

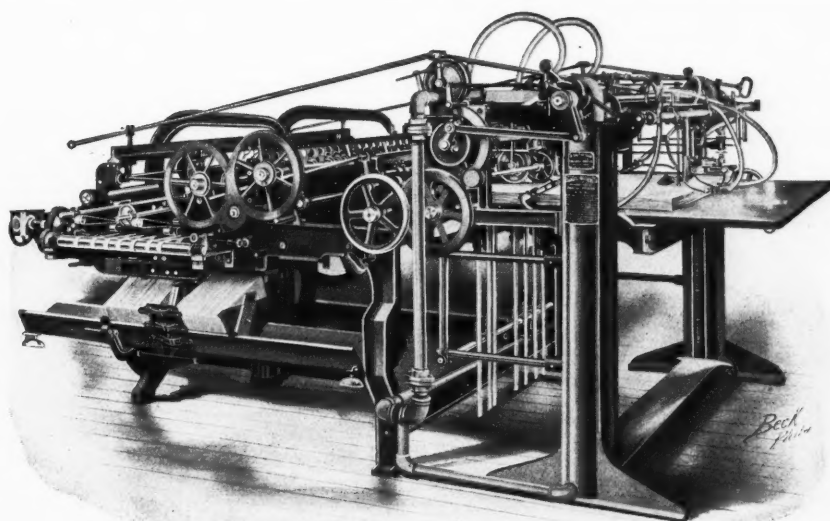


HALF-TONE BLACK, 3482.

**The Queen City Printing Ink Co.**

**Makers of High-Grade  
PRINTING INKS**

CINCINNATI • CHICAGO • BOSTON • PHILADELPHIA



Patent No. 768,375. August 23, 1904.

THE CHAMBERS DROP-ROLL DOUBLE-SIXTEEN FOLDER WITH KING FEEDER ATTACHED.

## The Chambers Paper Folding Machines

have a successful business record of over forty years, while the

### King Automatic Feeder

has now a proven record of nearly three years constant hard use under many different conditions.

#### AMONG OUR CUSTOMERS FOR KING FEEDERS ARE

Curtis Publishing Co.....	Philadelphia.....	18	H. M. Plimpton & Co.....	Norwood, Mass. ....	3
Times Printing House.....	".....	2	J. J. Arakelyan.....	Boston, Mass. ....	1
Mr. Geo. F. Lasher.....	".....	6	Western Methodist Book Concern, Cincinnati, Ohio, ..	3	
Historical Publishing Co.....	".....	1	Peruna Drug Mfg. Co. ....	Columbus, Ohio ....	1
American Lithographic Co.....	New York City.....	2	Egbert, Fidler & Chambers....	Davenport, Iowa....	1
Doubleday, Page & Co.....	".....	3	Inland Printer Co.....	Chicago, Ill.....	1
Williams Printing Co.....	".....	1	Kenfield Publishing Co.....	".....	2
Chas. Schweinler Press .....	".....	1	Rozek, Theelin & Larf.....	".....	1
Methodist Book Concern.....	".....	2			

## CHAMBERS BROTHERS COMPANY

*Folding and Feeding Machines*

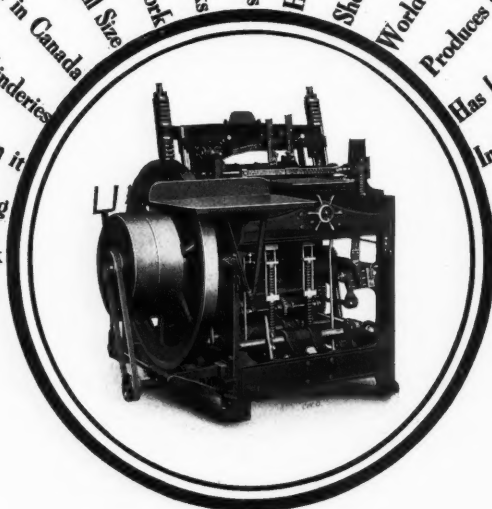
PHILADELPHIA, PENNSYLVANIA

CHICAGO OFFICE, 59 WEST JACKSON BOULEVARD

Agent for Great Britain, W. H. BEERS, 170 EDMUND STREET, BIRMINGHAM



Handles hand or machine sewed books  
 Rounds and backs at one process  
 Handles books from  $\frac{1}{8}$  to  $3\frac{3}{4}$  in. thick  
 Shows profit on lots of 25 books  
 World's Atlas done on Extra Large Size  
 Produces superior heavy law and medical work  
 Has handled a book weighing 20 pounds  
 In 94 United States binderies  
 4 binderies use 5 or more each  
 Perfect "flat-back" work  
 Uniformity of work  
 40 to 60 per cent saving  
 Oxford Bibles are done on it  
 In all the largest British binderies  
 Used in all parts of the U. S. and in Canada  
 Pocket prayer-books done on Small Size  
 Produces superior "flexible" cover work



*The sun never sets on*  
**Crawley Rounders and Backers**

(Write for Circular No. 10 x)

*Made and sold in America by*  
**THE CRAWLEY BOOK MACHINERY COMPANY**  
 Newport, Ky., U. S. A.

*Agents:*

**E. C. FULLER CO.,** New York and Chicago, U. S. A.  
*Agents in the Americas.*

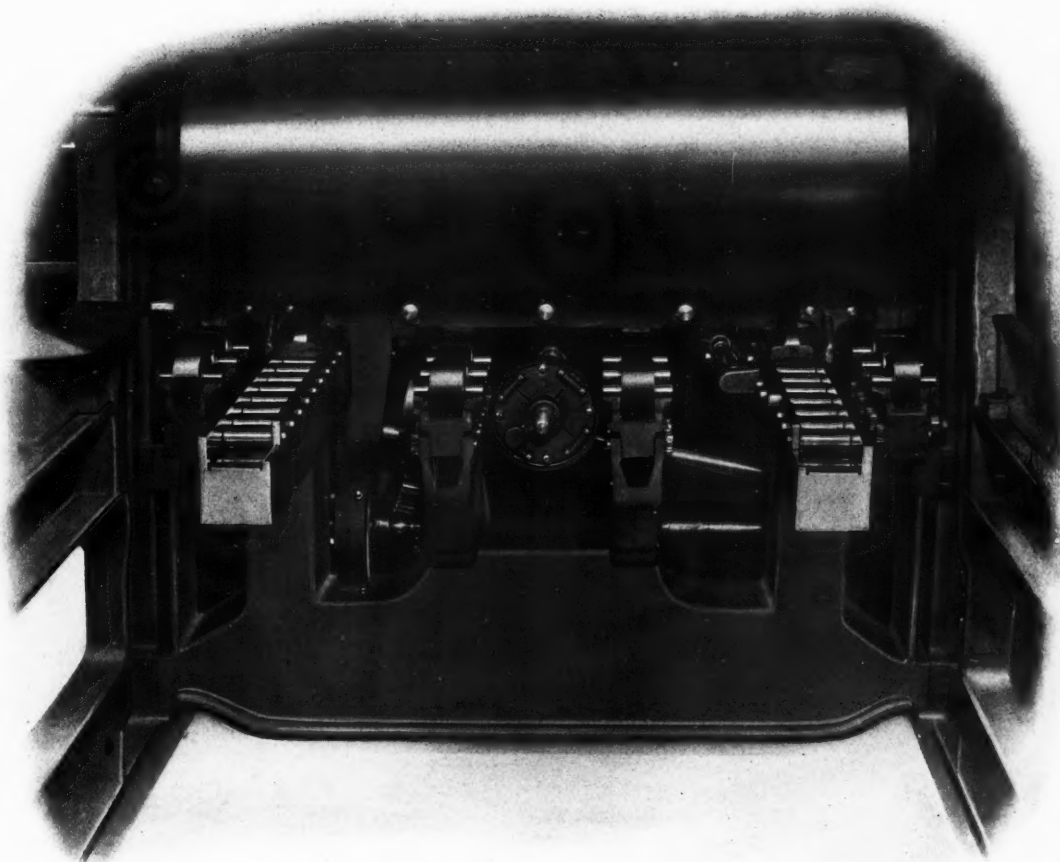
**HOBBS MANUFACTURING CO.,** 37 Featherstone Street, London, E. C.  
*Sole Agents for British Isles.*

**T. W. & C. B. SHERIDAN CO.,** Salisbury Square, London, E. C.  
*Sole Agents for Continental Europe.*

THE BABCOCK PRINTING PRESS MANUFACTURING CO., NEW LONDON, CONNECTICUT  
New York Office, 38 Park Row. John Haddon & Co., Agents, London. Miller & Richard, Canadian Agents, Toronto, Ontario.

BARNHART BROS. & SPINDLER, WESTERN AGENTS, 183-187 MONROE STREET, CHICAGO  
Great Western Type Foundry, Kansas City; Great Western Type Foundry, Omaha; Minnesota Type Foundry Co., St. Paul; St. Louis Printers Supply Co., St. Louis;  
Southern Printers Supply Co., Washington; The Barnhart Type Foundry Co., Dallas; E. C. Palmer & Co., Ltd., New Orleans; Fundicion Mexicana de Tipos, City of  
Mexico. On the Pacific Coast—The Southwest Printers Supply, Los Angeles; Pacific Printers Supply House, Seattle; Pacific States Type Foundry, Oakland, Cal.

# The Babcock Optimus



The simple bed motion of the Optimus occupies little space. It gives room for the heaviest center girt used in any press. This girt supports six tracks, with broad surfaces, easily adjusted to compensate for wear. Upon the tracks is placed the best supported bed in use. The girt is flanged to the side frames, relieving the bolts from strain of impression. It is not merely a tie between side frames, but a massive, unyielding support to impression.

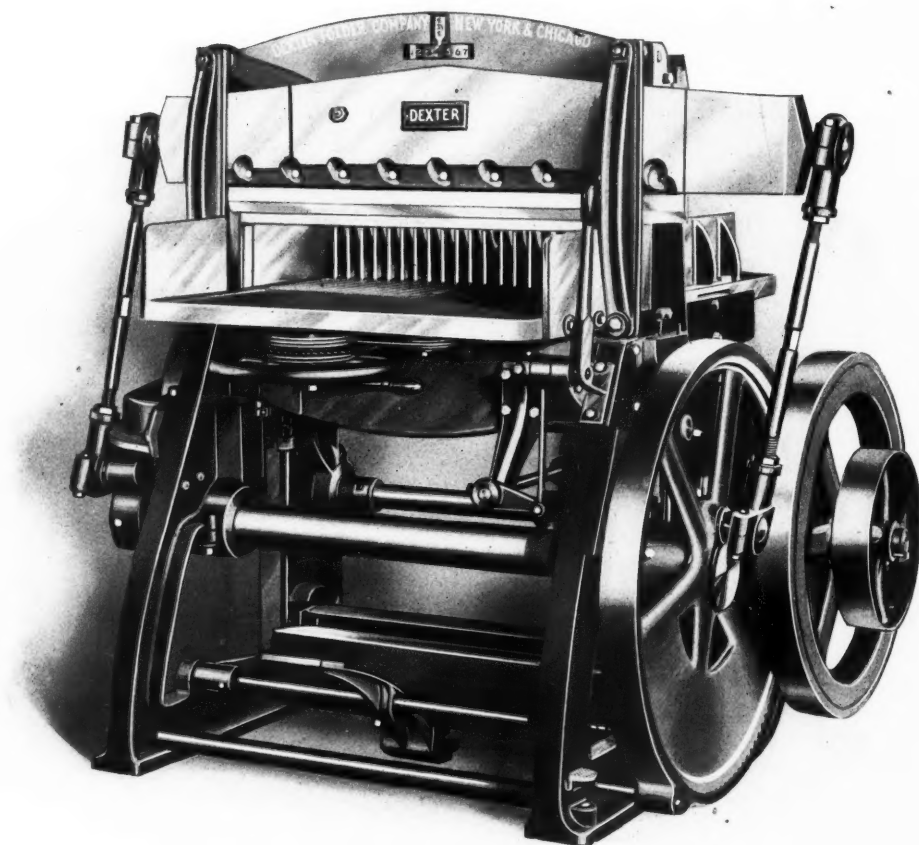
Above the bed is a heavy, well braced and accurately balanced cylinder, with a large steel shaft nearly twice as strong as the cast iron shafts used in others. This shaft runs in long and heavy steel boxes, placed close to cylinder, and fixed solidly as parts of the heavy side frames. The cylinder, therefore, is held to form by the side frames contrary to the practice in all other presses, wherein the boxes are loose and slide up and down as the cylinder rises and falls at each impression.

This construction gives the most rigid impression, and makes the strongest and most durable of presses.

SET IN BARNHART BROS. & SPINDLER'S OLD ROMAN CONDENSED.

# Do You Need a Cutter?

---



THE DEXTER AUTOMATIC CLAMP PAPER CUTTER

Several manufacturers claim the honor of making the best cutter. Each of these machines has some good points. There is but one positive test; that is a side-by-side comparison.

We invite this fairest of all investigations, and are certain we can show greater strength, fewer parts, best driving clutch, greatest clamping power and perfectly true work.

WRITE FOR DESCRIPTIVE MATTER

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## DEXTER FOLDER CO.

MAIN OFFICE AND FACTORY—PEARL RIVER, N. Y.

NEW YORK

CHICAGO

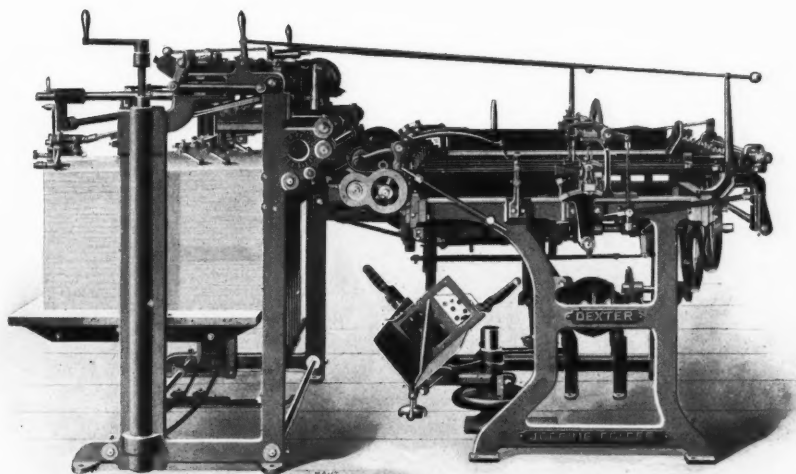
SAN FRANCISCO

BOSTON



# Are You Going Fishing?

---



THE DEXTER JOBBING BOOK AND PAMPHLET FOLDER  
WITH DEXTER AUTOMATIC FEEDER

A western man, visiting down east, bought a fine rod and went fishing. Paid a good sum for boat hire, too, and caught what he was told was a Win Fish, but he knew better. It was just an ordinary, worthless, little "Chub."

You can pay a good price for a folding machine with high-sounding claims, yet get just an "ordinary Chub." Novel individuality takes the Dexter out of the "Chub" class.

It is these novel, patented devices that made machine-folding a success on high-class work. They are Dexter's.

---

Our Jobbing Book Folder for 8, 12, 16, 24 and 32 pages, also parallel 16's and parallel 32's, two on, with a range of sizes from 14 x 19 to 32 x 44, is a wonderful "money-getter." It will pay you to investigate.

---

## S A L E S   A G E N T S

### *Great Britain and Europe*

T.W. & C. B. SHERIDAN Co., London, Eng.  
Canada, J. L. MORRISON Co., Toronto  
Australia, ALEX. COWAN & SONS  
Melbourne, Sydney, Adelaide  
South Africa, JOHN DICKINSON & Co.  
Cape Town, Johannesburg and Durban

## DEXTER FOLDER CO.

MAIN OFFICE AND FACTORY — PEARL RIVER, NEW YORK

### BRANCH OFFICES:

NEW YORK BOSTON CHICAGO SAN FRANCISCO

*Southern Agents*—J. H. SCHROETER & BRO., Atlanta, Ga.

*Mexico*—LOUIS L. LOMER, Mexico City

# The Fuchs & Lang Mfg. Co.

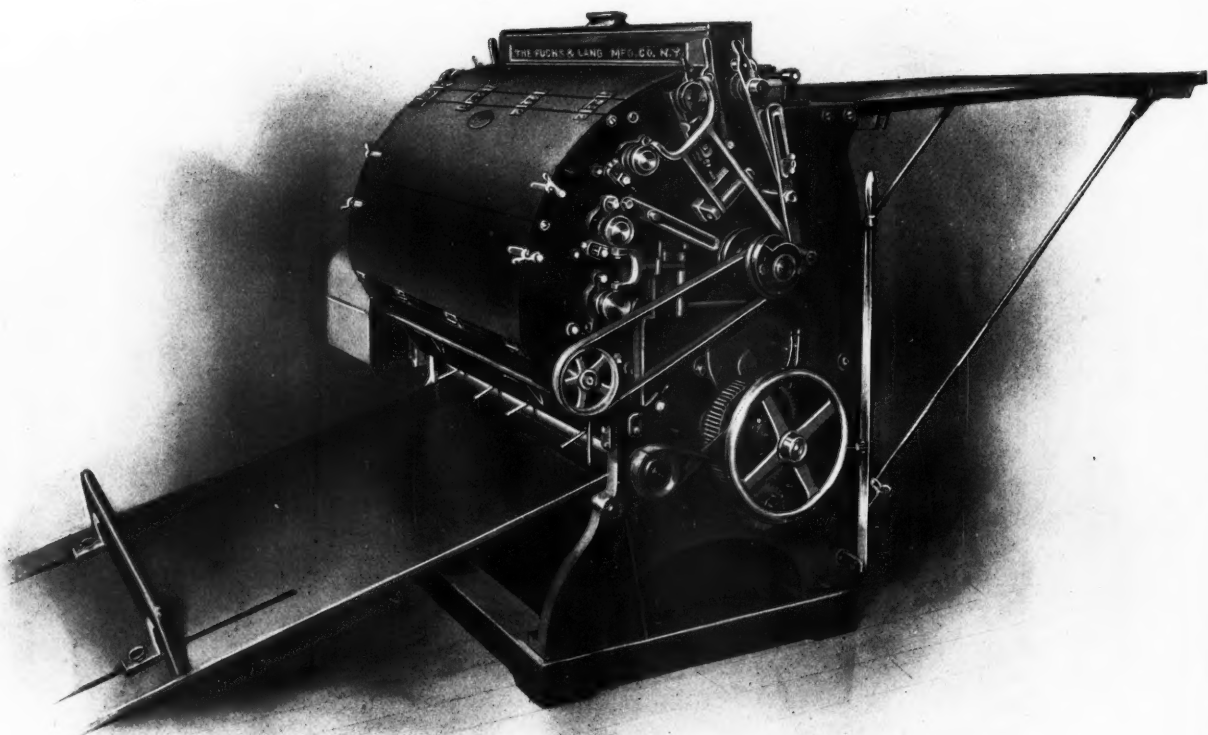
MACHINERY AND SUPPLIES FOR  
LITHOGRAPHERS AND PRINTERS

29 WARREN STREET, NEW YORK  
328 DEARBORN STREET, CHICAGO  
150 N. FOURTH ST., PHILADELPHIA  
44 HIGH STREET, BOSTON, MASS.  
Factory and Machine Works  
RUTHERFORD, N.J.



Owners of  
EMMERICH & VONDERLEHR  
MACHINERY

## BRONZING MACHINES CENTURY MODEL

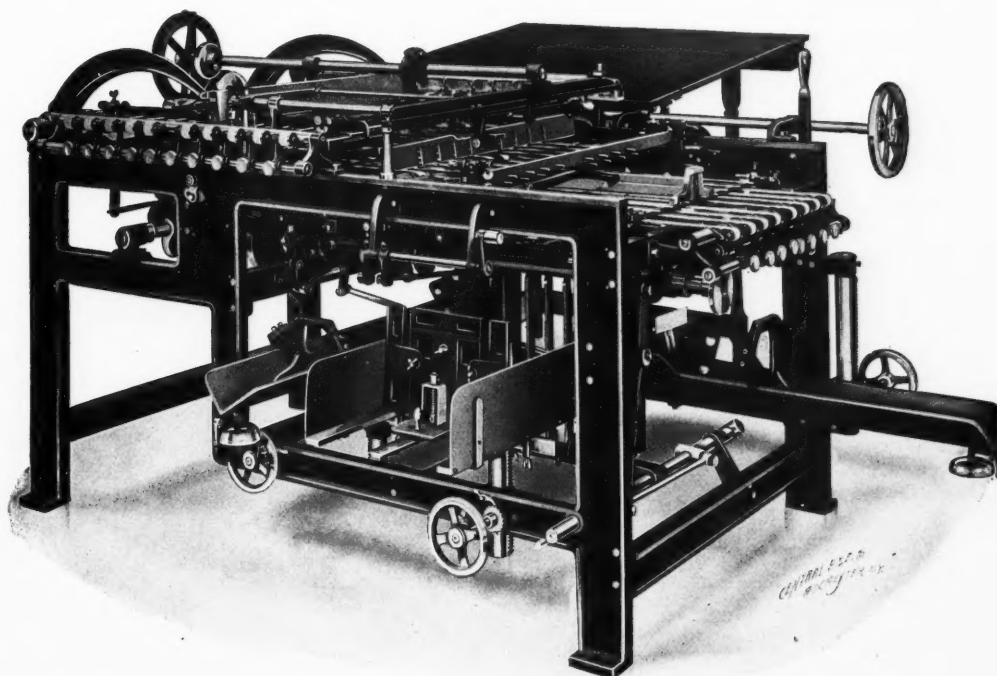


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WE ORIGINATE  
OTHERS COPY

The  
"TOGO"  
Catalog and Book Folder



For Fine Art Catalog Makers.

Performs its work both in *regular* and *oblong* folds.  
Folds 6, 8, 10, 12, 16, 18, 20, 24 and 32 pages.

---

Made by

**Brown Folding Machine Company**

Erie, Pa., U. S. A.

Agencies

New York, . . . Thos. Crofts  
150 Nassau Street

London, W. C., J. Collis & Sons  
42 Regent Square, Gray's Inn Road

Chicago, Champlin & Smith  
121 Plymouth Place



# Melting Weather



comes in July and August. Thunder-showers, with sunshine following, put many a Roller out of use that you thought would carry you through the season. As the old almanacs used to say, "look out for hot nights about now"—"frequent thunder-showers should be expected."

¶ Of course economy is a good thing to practice. I advocate it for others. It is always the proper thing to preach as do Rockefeller, Carnegie and Sage, but somehow economy frequently leads through sheer force to great prodigality, so if you have been economical in your purchase of Summer Rollers before this date, don't lean too far the other way and be too prodigal now,

*because*, as a woman would say, any Roller made now or in August must be expected to be too hard and dry when there are no thunder-storms or great heat, or about the latter part of September.

¶ Should you have failed to be supplied, we will pull you out on time.

¶ The safest plan is to get your order in to us right away. We can and do do those things in Rollers that nobody else knows how to do.

*Herbert M. Bingham*

**BINGHAM BROTHERS CO.**

FOUNDED 1849

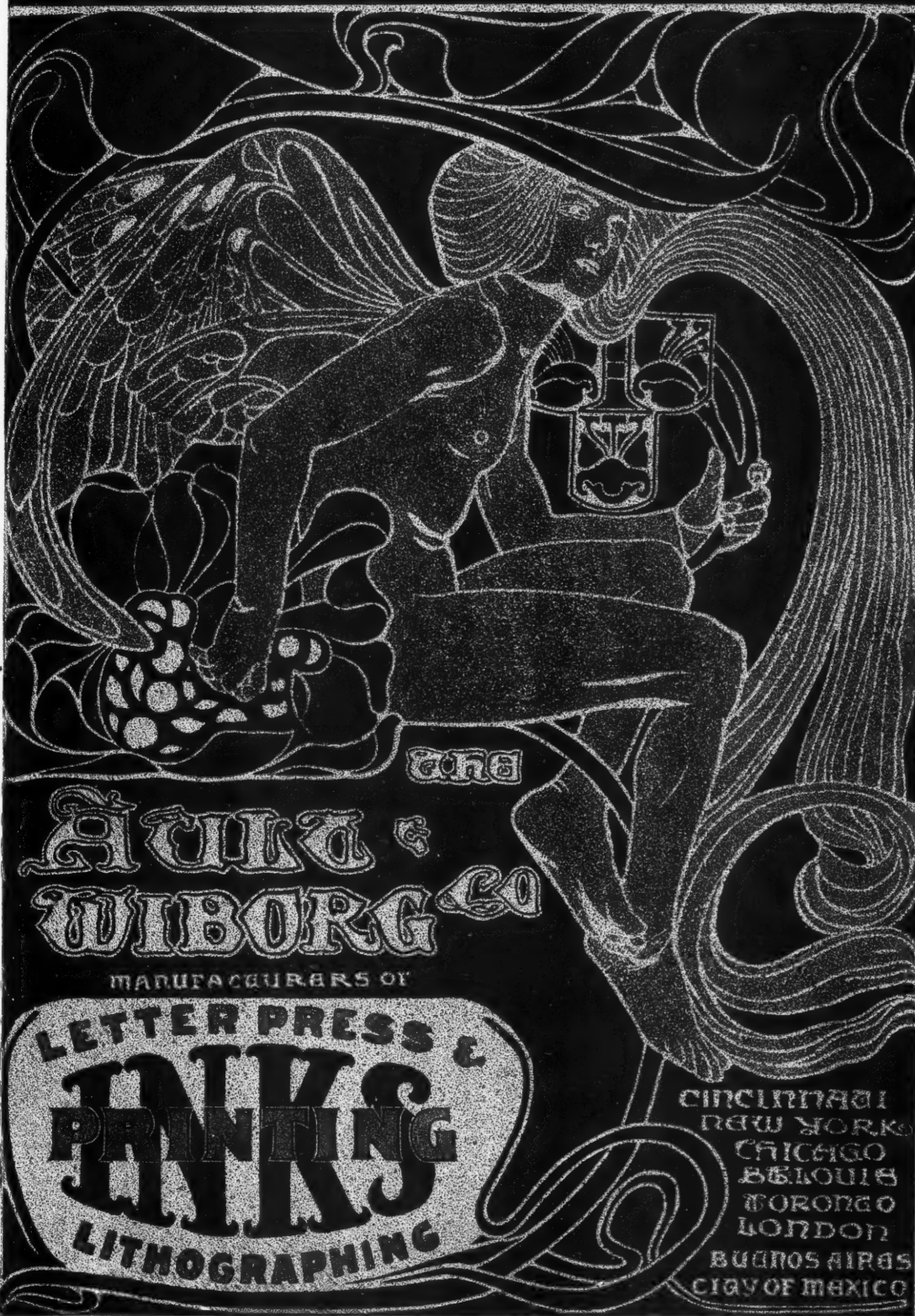
**ROLLER MAKERS**

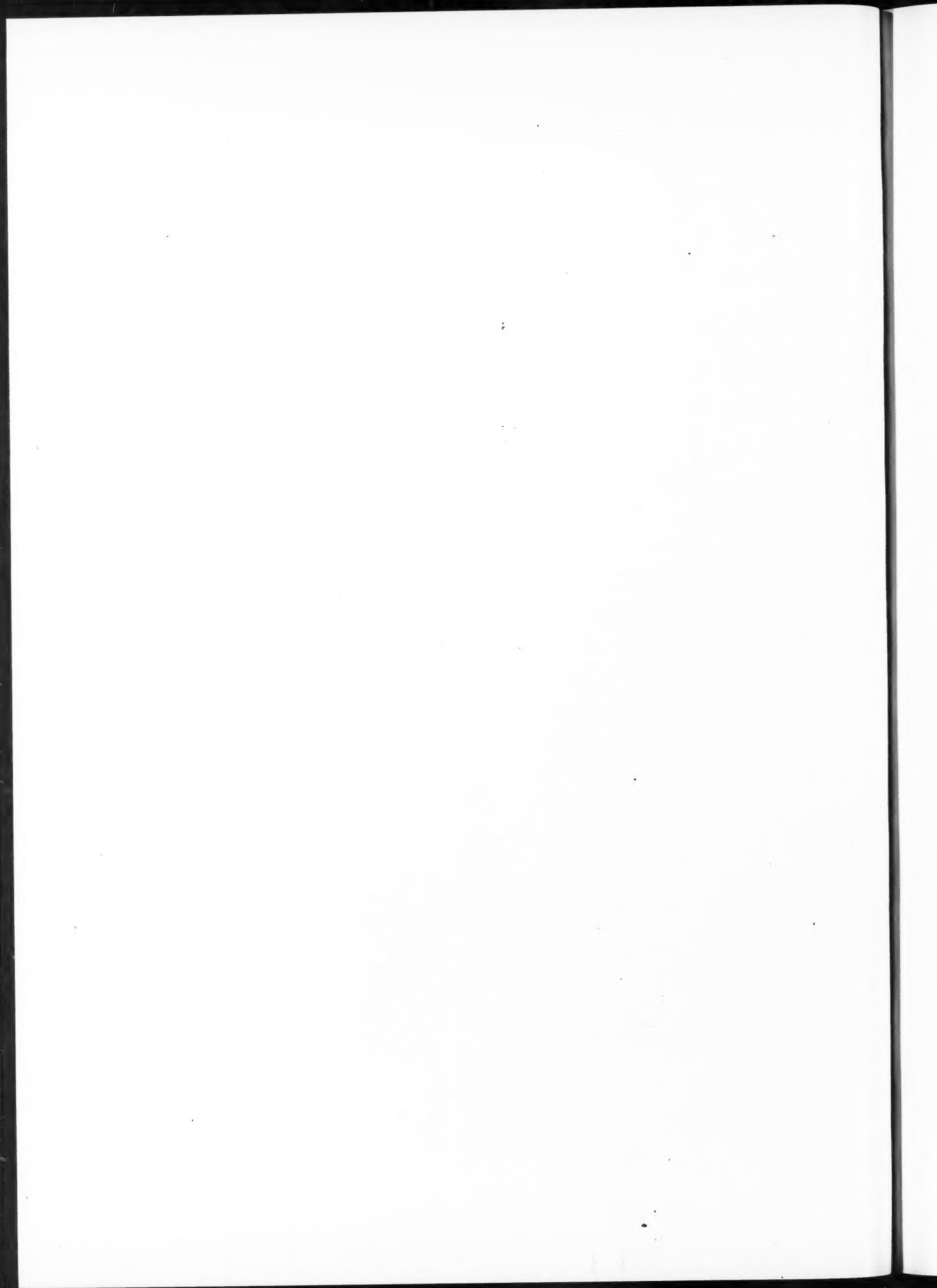
NEW YORK - - - - - 406-408 Pearl Street  
PHILADELPHIA - - - - - 413 Commerce Street

Allied with BINGHAM & RUNGE, Cleveland



# SECESSION







# HE BUYS RIGHT

In my last advertisement I asked the printers of the country to guess the reason why Mr. Vallee Harold, of the Portsmouth, Ohio, *Times*, should send his orders to me accompanied by the cash, six hundred and sixty miles away, when he is located only eighty miles from some of the largest ink houses in this country, and from whom he could buy tons of ink on credit if he so desired. The answer to this knotty problem has been solved by Mr. J. M. White, of the Louisville, Ga., *News and Farmer*, when he remarked: "I never get faked in price or quality, for I buy all of my inks from Printers Ink Jonson." The publishers and printers who buy from me know they will be charged just what their neighbors would have to pay, as there are no alluring discounts offered, or favors granted to insiders, and every one is on the same level as far as the paying part goes. When the inks are not found up to the highest standard of quality, the money is refunded, also the cost of transportation.

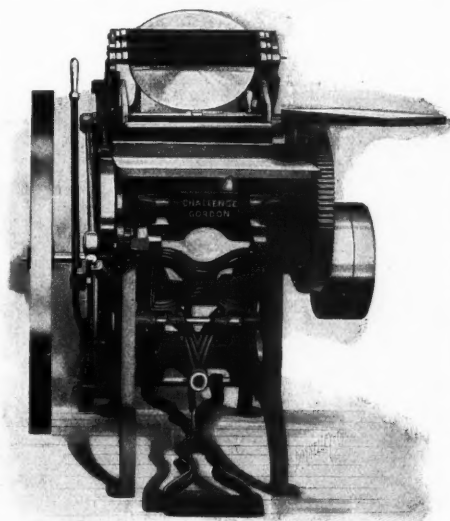
SEND FOR MY NEW SAMPLE BOOK

ADDRESS

## PRINTERS INK JONSON

17 Spruce Street, New York

# QUALITY IS OUR HOBBY



We have one Hobby—that Hobby is "quality." The

### Challenge-Gordon Job Press

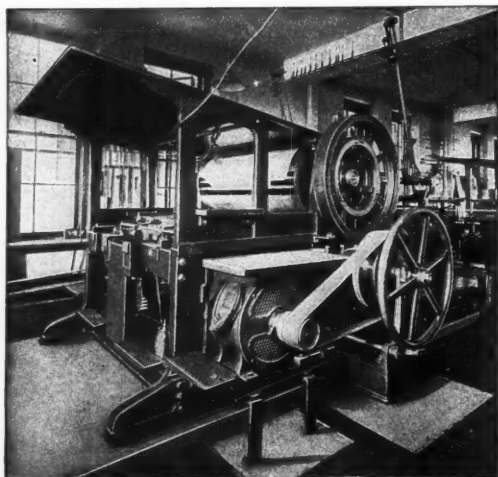
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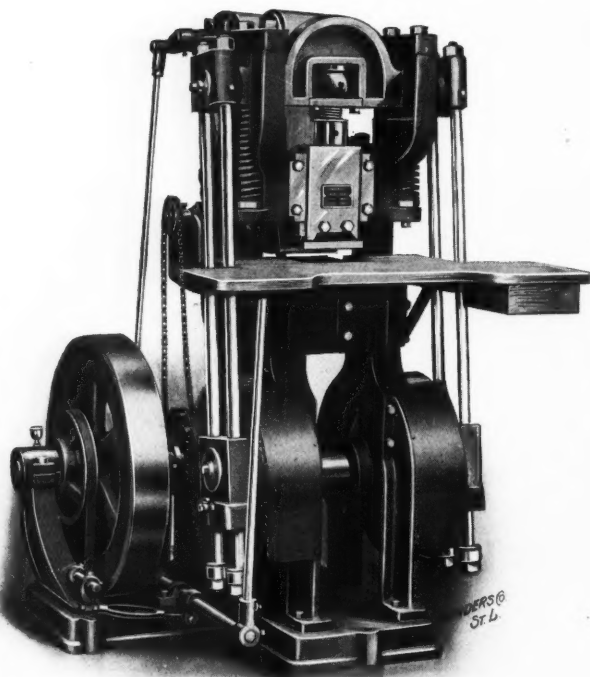
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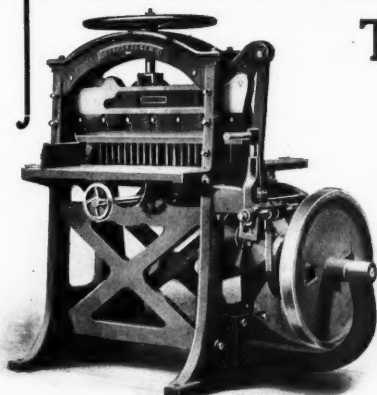
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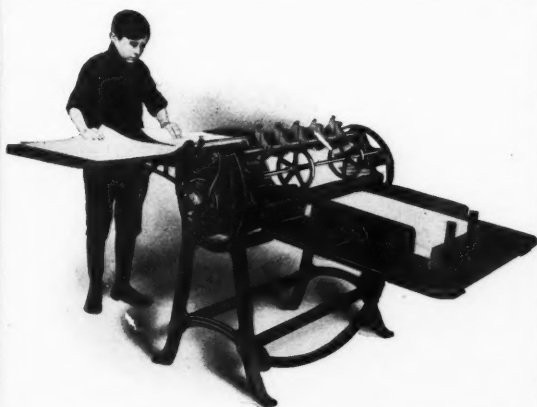
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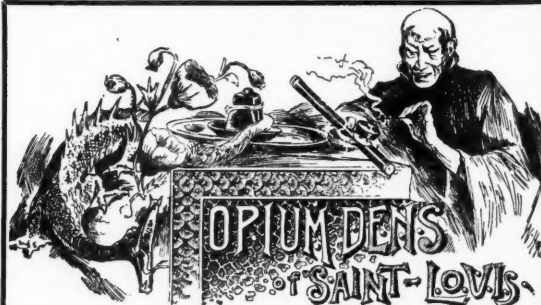
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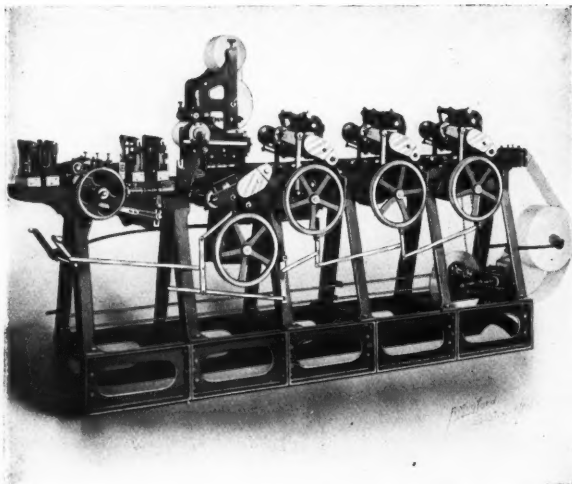
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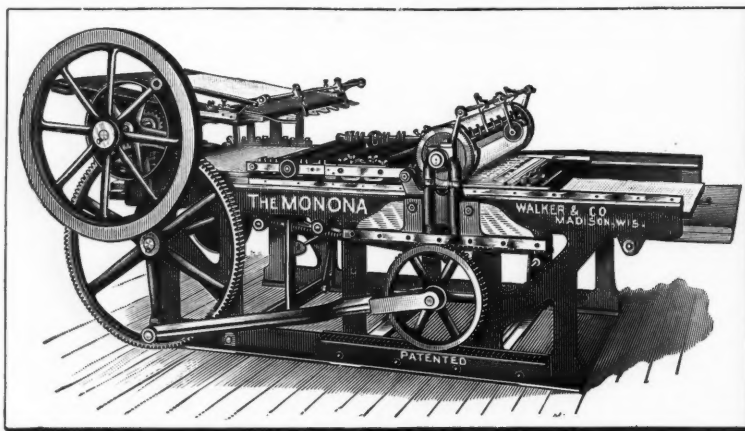
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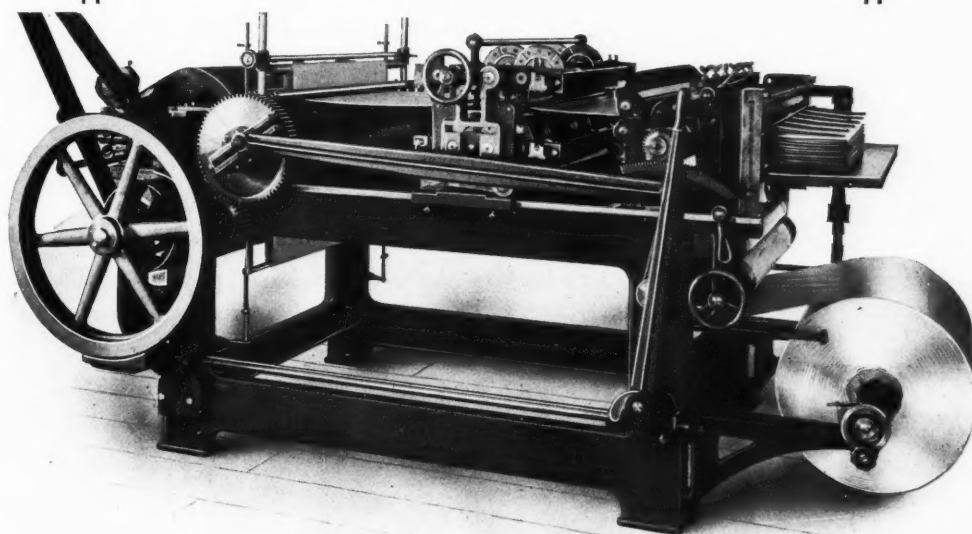
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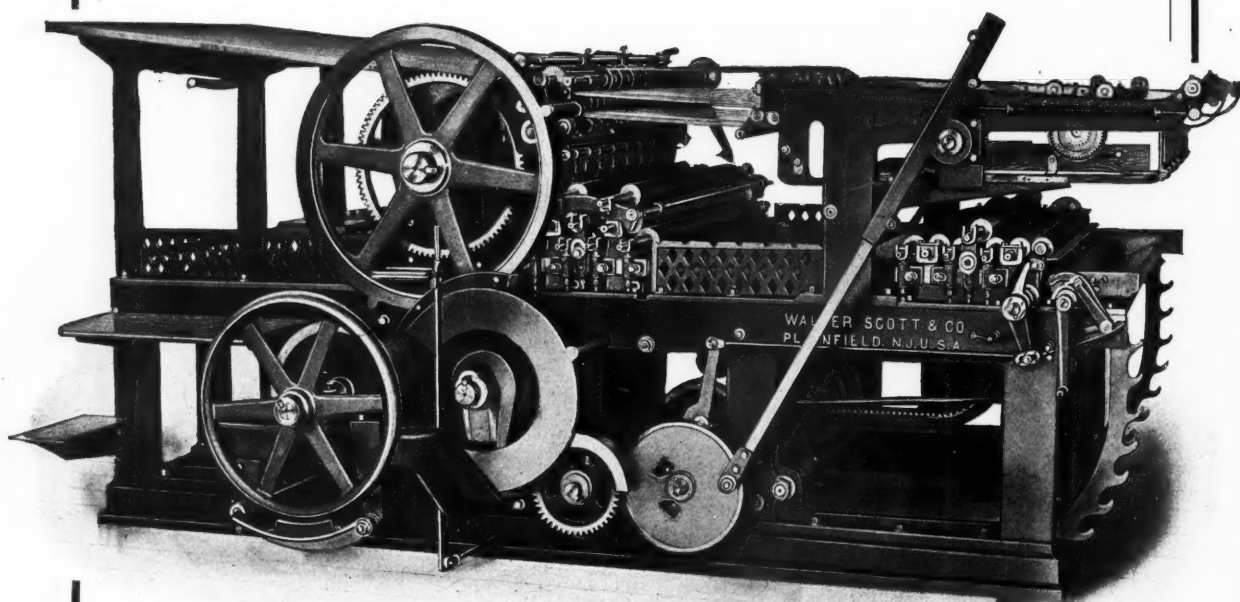


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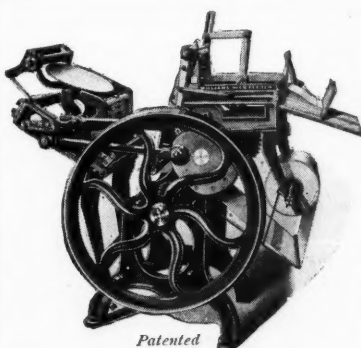
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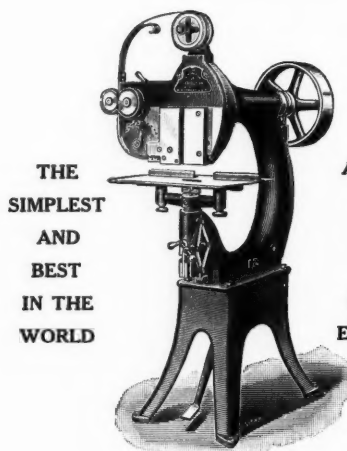
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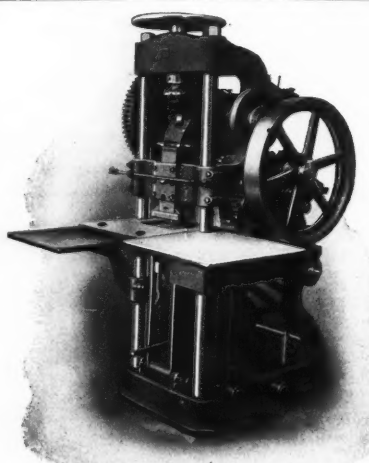
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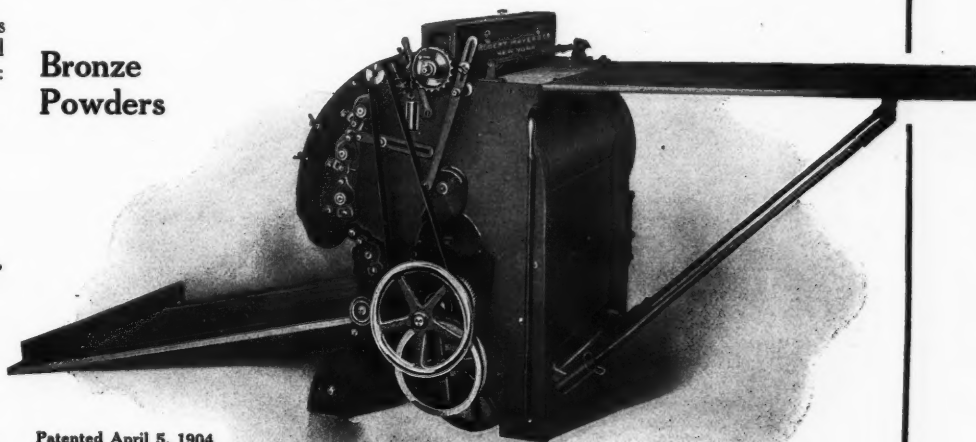
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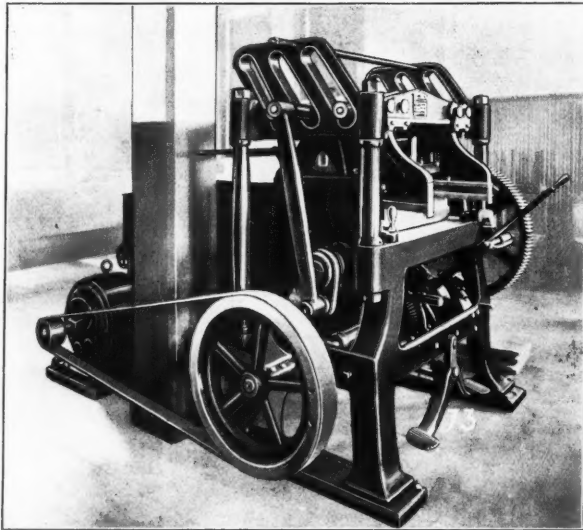
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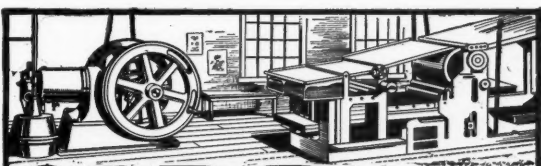
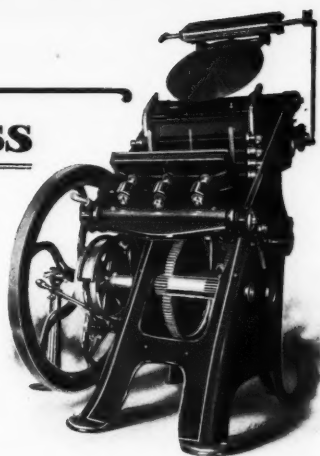
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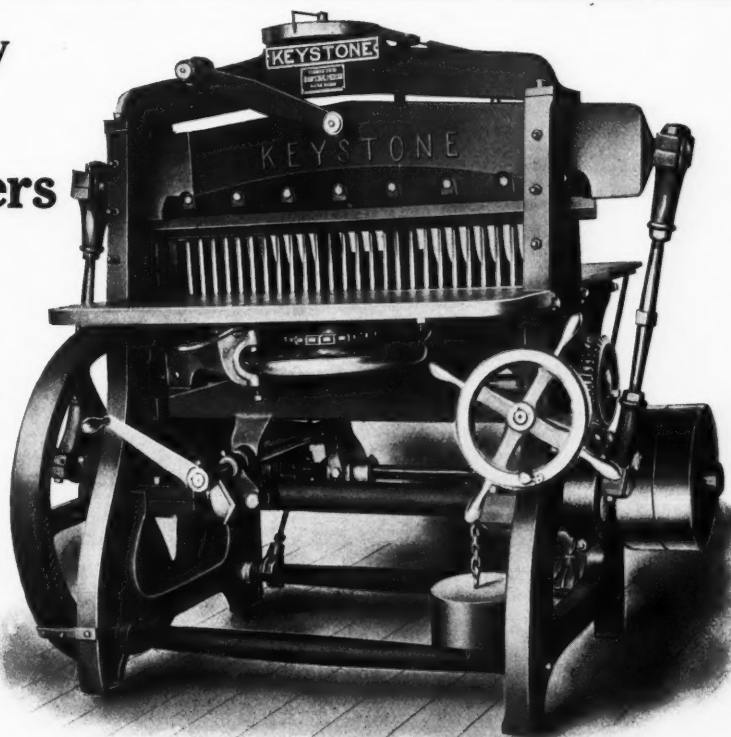
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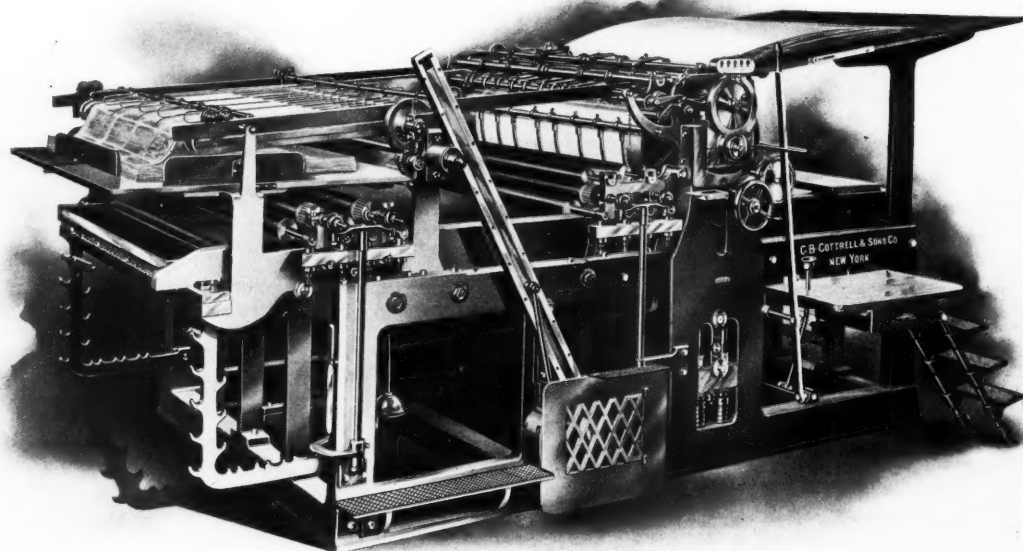
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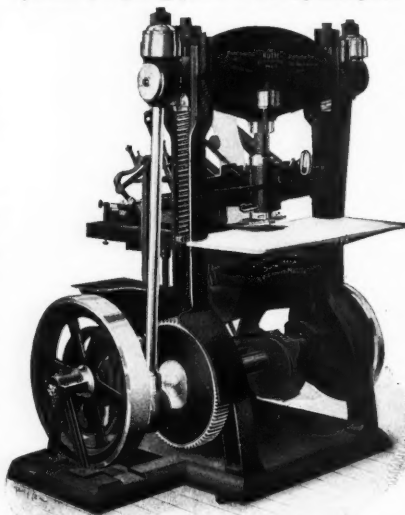
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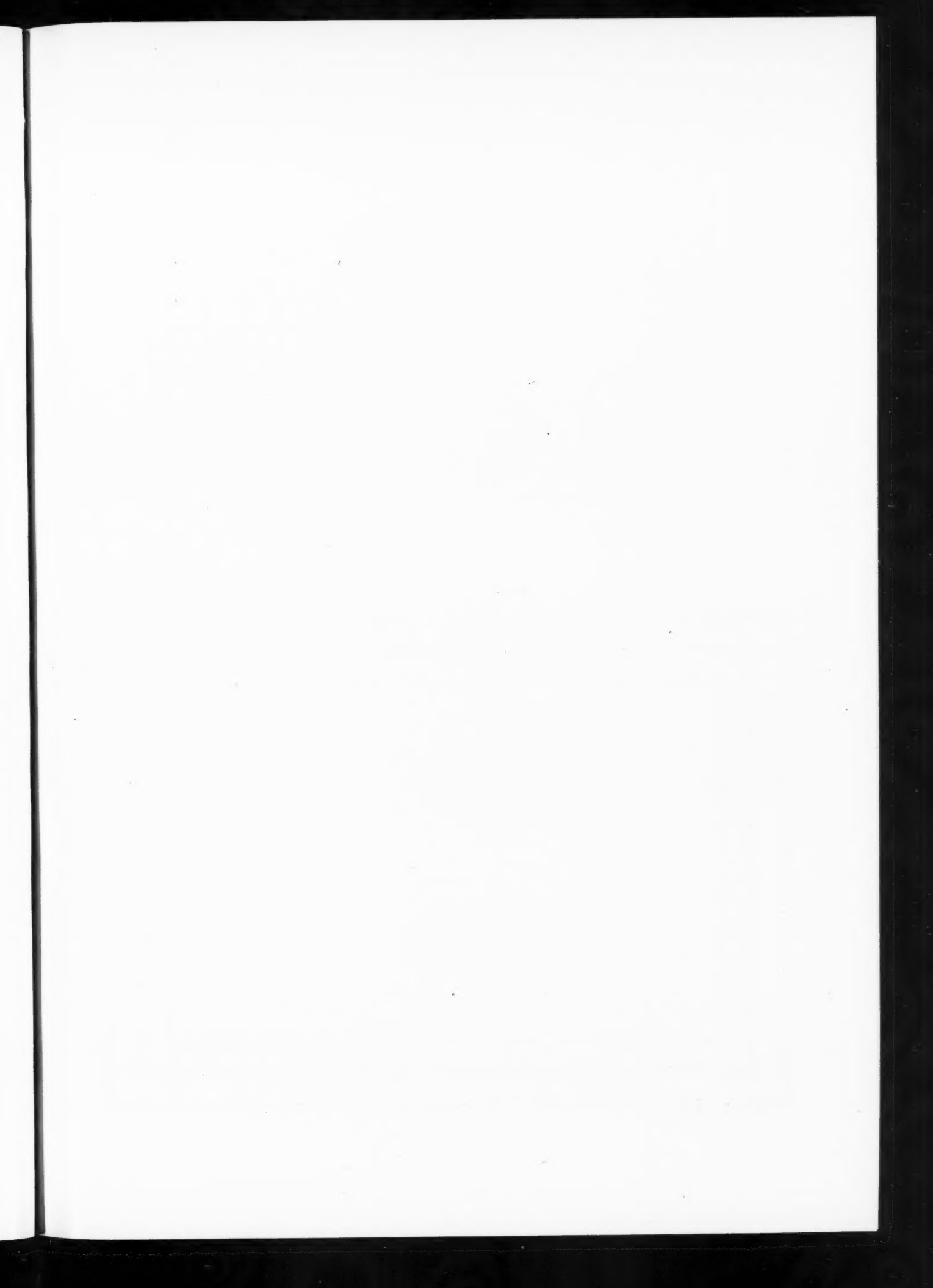
## INLAND TYPE FOUNDRY

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SEVEN CASTLES  
ON COLORADO MIDLAND RAILWAY

COLOR PLATES AND PRINTING BY  
THE SMITH-BROOKS COMPANY  
DENVER, COLORADO



THE LEADING TRADE JOURNAL OF THE WORLD IN THE PRINTING AND ALLIED INDUSTRIES.

VOL. XXXVII. No. 4.

JULY, 1906

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      } Foreign, \$3.85 per year.

DISCURSIONS OF A RETIRED PRINTER.

[Henry Lewis Bullen]

NO. I.—BY "QUADRAT."



MAN pleads guilty to old age when he becomes reminiscent. The printers of to-day seem dreadfully young to me; perhaps I am old; but do you young printers appreciate what has been done for you by men of my time? I am afraid that very few know and fewer care. But, hold! is this not another sign of old age—to decry the young; and far be it from me to do so, because these "dreadfully young" fellows have the air of know-

ing so much more than we old men, and perhaps they do. Who knows?

Men who did great things for America and other printerdoms have recently passed on to their eternal rewards; other veterans have laid aside their tools, waiting for the summons to take the path that all, soon or late, are doomed to tread; and I, before it is too late, would fain record some true little histories of "once upon a time."

This retrospective mood was awakened by the examination of a new book—the "American Line Type Book, 1906," just issued by the American Type Founders Company. Now, most sapient reader, I admit this looks suspicious; for who would review a typefounders' specimen book but a paid puffer of salable wares? Most justifiable suspicion! for where shall we escape ad-smith or press agent. If we look toward the heavens, behold his kite is there; the rocks and hills disclose his handiwork; we venture on the great waters, but can not escape him; we close our eyes, and our ears testify to his omnipresence; yea he

feedeth us with predigested viands which are but one of fifty-seven thousand varieties of his wiles; and man escapeth not even in the grave, for he hesitateth not to resurrect "generously good" virtues to exploit a cabbageous imperfecto cigar. He poundeth from the pulpit; the press is his happy hunting ground, and, with the aid of a microscope of intense power, he may even be discovered at intervals (of every other page) lurking in the solemn columns of some printing trade journals—but not on this page or the next; I swear it upon the virtuous emptiness of my lean and hungry purse; for many moons have waxed and waned since I have seen a pay envelope; and, furthermore, I hope to prove an alibi by the self-evident impartiality of succeeding paragraphs, to the effect that I am not that lever of modern commerce, a press agent; for a sage says well, "Mind is the lever of all things," and what other order of mind can create an alpine range of merit out of sand hills of mediocrity. My plea, then: Not guilty!

This new typebook then, to return to our story, is a landmark in typefounding, most interesting for what it does not contain—the first specimen book of a new period in the type trade. Its editors have therein served notice that certain things are done with—things very good, even indispensable, in their day, but now to be shelved so far as typefounding is concerned. Who can tell whether it means a lessening or an increasing demand for the typemaker's work? That is his problem, and he is, as this book shows, ready to face it. It takes courage to discard things good in themselves, to throw aside assets, and take the lead in a new direction; and it requires typefounding ability of a high order to do it successfully, as this book proves it has been done.

Printers owe to two of our youngest typefounders, William and Carl Schraubstadter, of the Inland Type Foundry, that improvement known as the lining system, which under various names, "Uniform," "American," and the like, adopted by their competitors, is substantially the same. This improvement was easy to them, as they began a new foundry based on a systematic lining system, but it became a serious matter to their competitors, hampered by the accumulated matrices of many years, when the inexorable logic of competition compelled them to follow the Inland Type Foundry's lead. To begin right is one thing; to take the wrong and change it, that is very difficult and expensive. The American Type Founders Company is a consolidation of twenty typefoundries. On starting business in 1891 it had probably matrices for over two thousand series of type. Discarding duplications, it had matrices for about seven hundred and fifty series of distinctive type faces. In 1900, nine years after starting, it issued a complete general specimen book, containing the salable residuum of its type-faces — 525 series of job and thirty-seven of body type. Not long after it had to face the lining system proposition. In 1903 it issued a quarto (292 pp.) preliminary specimen book of lining type. It now, in 1906, issues its "American Line Type Book," and it is a safe assumption that its contents represent every series it finds salable enough to go to the expense of changing to the lining system. Comparing it with the 1900 book, I find that of the 562 series in that book only 126 series are retained, to which are added ninety-two job and six body type series that have been originated since 1900: 224 series in all. Though these 436 series disappear from the specimen books, the company doubtless has stocks of them, and will be able for some time to come to fill such orders as may be stimulated by earlier specimen books or may be required to strengthen fonts already in use. I may return to a consideration of the contents of this 1906 book, with those of other books, in a subsequent article.

The significant thing in this elimination is that a large proportion of these discarded series are long familiar plain job-faces, such as Ionics, Clarendons, Gothics, Antiques, etc., which twelve years ago were the very bone and sinew of the type-trade, but are now in the best selling sizes producible on Linotypes and Monotypes. The field of the typemaker is narrowed to the decorative department, his work to provide style to the body-work of the composing machines. To create a new type-style, exploit it vigorously, and supersede it with another fashion so soon as the sales slacken, must now be the policy of the typemaker. As the field narrows, the ability of the typefounder

must broaden; the dividends will belong to those who set the type-fashions. Had the majority of the typefounders who in 1891 sold out to the American Type Founders Company remained in business, and continued their policy of relying upon the manufacture of body letter and plain job-type, they would be out of business to-day or getting ready to close their foundries.

It is my purpose at this parting of the ways to tell the story of American typemakers and typefounders during the past thirty years, to preserve the memory of many progressive estimable men and firms who have conferred great benefits on printerdom, to give honor where honor is due—in short, as well as I can, none else volunteering, to present a historical and anecdotal picture of the palmy days of the old-school typemen and their work.

Thus times do shift; each thing its turn doth hold;  
New things succeed, as former things grow old.

Until the last third of the nineteenth century American typefounders were all pirates. Those good but now almost forgotten Aldines, Antiques, Clarendons, Latins, etc., and seven-tenths of our body letter, were all annexed from the Briton. Our publishers, also, down to a later period, were pirates. In those days the plight of the British typemakers was a sad one—we had little or nothing in the type line to steal, and they had already annexed all the Hollanders had in earlier years, and later on all from the French that could be sold in perfidious Albion; and now there was nothing left to do except to be virtuous and upbraid the Yankee spoiler, and ask him for his own salvation's sake to take the mote out of his star-spangled eye.

*Caslon's Circular* may serve as an exhibit: published by Caslon, real name Smith, later on by English law renamed Caslon-Smith; business descended from the man who nearly two hundred years ago cut the steel punches of that noblest of all type-faces which we call Caslon Old Style, roman and italic, and which the eminently respectable Johnson Type Foundry appreciatively annexed "before the war," but sold very little of until the taste for it developed in the nineties. The Caslon foundry has been operated these two centuries or more on the same spot, and partly in the same building. Mr. Smith was very vocally anti-American in the days of which I write, and particularly well do I remember his philippic against MacKellar, Smiths & Jordan, the gist being to this effect: Look at these American pirates; how brazen they are is shown by the use of a letter they call 5-line Modern Text [No. 40] as a heading for their *Typographic Advertiser*; a letter designed and made by us, very meritorious



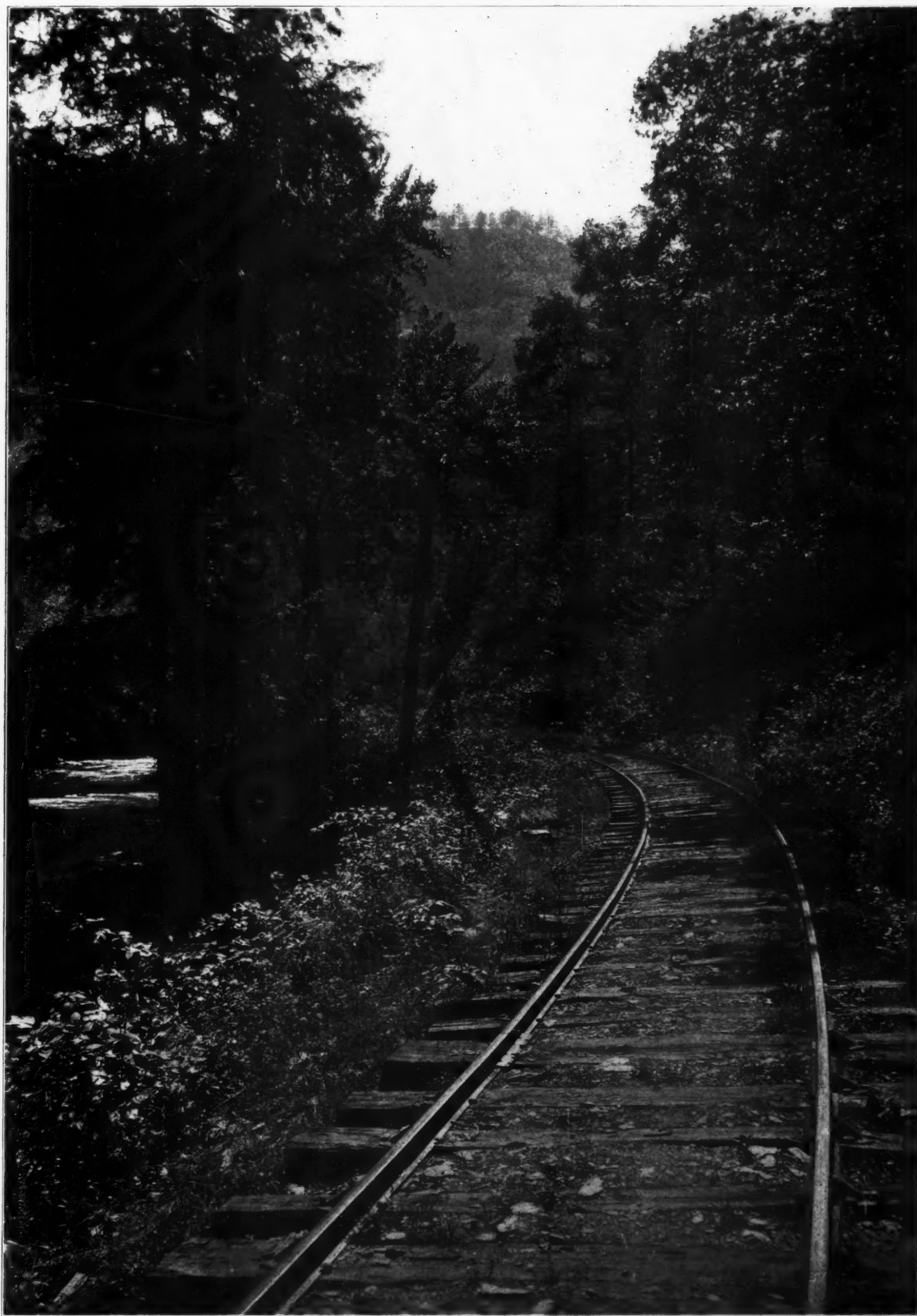


Plate by The Inland-Walton Engraving Company.

ROAD TO MURPHY, N. C.

Copyright, 1905, by N. Brock.

else it were none of ours, which these Yankees have copied and sell, without having paid us even a thank-you for it. So much for the mote.

Forbear to judge, for we are sinners all.

In the same issue of *Caslon's Circular* there was an advertisement of the indispensable Little Giant Rule and Lead Cutter, invented by a draftsman named Brown, patented by Golding & Co., and promptly pirated by Smith-Caslon and other English concerns. There also were the advertisements of Cropper's Minerva, Wade's Anglo-American Arab, and Cook's Model job presses, comprising, with a bad copy of Merritt Gally's Universal, all the job presses used in England at that time, and all of them American inventions. The Minerva is the Old Style Gordon, the Arab is the New Style or Franklin Gordon, both invented by George P. Gordon, and the Model was the invention of Daughaday, of Philadelphia — a press that has disappeared on this side. In other lines, too, at that time, it was clear that John Bull was dependent on his Uncle Sam for inventions for printing with, and so he is to this day. And had we looked into the Caslon castingroom, or that of any other British typefoundry of that time, we would have found that all their type was cast on piracies of the typecasting machine — the first practicable type-machine made — invented in 1838 and greatly improved in 1843 by David Bruce, cousin of that David Bruce who was the last of the eminent Bruce typefounding family.

And, further, had you visited old England in those days, as I did, you would have been amused or amazed to find there men of the highest respectability, looking you in the eye, conscious of the infallibility of British rectitude, claiming British paternity for most of these machines, and accusing the Yankees of pirating them. So much for the beam.

The personalities indulged in by English and American typemakers thirty and more years ago are amusing to us who can now look back with unprejudiced eyes. In 1868, under the head "More Borrowing," Mr. MacKellar, in his *Typographic Advertiser*, commenting on British appropriation of the Gordon press, growls: "Why will not our over-the-way neighbors do the fair thing by us?" seemingly oblivious to the fact that his own specimen book was full of type faces originated in England, which on the other hand had at that very date annexed his beautiful Card Text, Fancy Text, etc. The *Typographic Advertiser* first appeared in 1855. It was and will ever remain the model of what a typefounder's publication should be — of high literary merit, of unexceptionable taste and perfectly printed. In 1875 Mr. Smith started his *Caslon Circular*, and in his

opening article says that the idea of printing such a paper was quite an old one with him (very difficult to antedate an Englishman's ideas!) but he had conceived a "prejudice based on the issue in a sister country of typefounders' publications which certainly were distinguished more for vulgarity than good taste," meaning the *T. A.* Now I knew these men; their truthfulness and probity were high — I have before me a complete file of that splendid *Typographic Advertiser* — and I know that what Mr. Smith wrote was a slander. The fact is that both men's pens ran away with them when their national prejudices were excited.

Piracy is too harsh a word to apply to these international exchanges, for they were legal in the absence of protection, and in those days few American inventors took out foreign patents. To-day English law protects type-designs more effectively than our own. Whether a United States patent will protect a type-design has yet to be determined in the courts; the typefounders do not seem anxious to proceed to a test, even when their designs are copied; and, while they continue to patent, find more security in a "gentleman's agreement" among themselves.

In recent years Mr. Caslon-Smith became more appreciative of American type, and is now making a number of American type-faces, having in every instance purchased the right to do so. Those who have visited his famous foundry must have brought back pleasurable recollections of his genial and sturdy character, and his pious veneration of the illustrious Caslon I., as he is designated. The first Caslon lived in no mean style in apartments adjoining his workshops. Some of the rooms are preserved in their original state, and on the walls are hung large portraits in oil of the Caslon typefounding dynasty, and there, if I am spared again to make the pilgrimage, I hope to see Mr. Caslon-Smith's portrait, well worthy as he is to have that honor. In these rooms, thanks to that fine old English trait, appreciation of the master-work and master-workers of the past, was a museum containing the long line of specimen books, old typefounding devices and mechanisms, mementoes of the business — in short, everything calculated to impress a mind interested in the development of a noble art-craft. Caslon cut sizes of his famous series up to twelve-line (if my memory serves), the sizes above seventy-two-point being cut in brass and the type cast in sand molds, and the original patterns are to be seen in this admirable little museum.

Let others hail the rising sun:

I bow to that whose course is run.

"People will not look forward to posterity, who never look backward to their ancestors," said

Edmund Burke. The only immortality we are humanly sure of is in the memory of future generations; and those who desire their work to be appreciated by posterity should do for the past what they would wish posterity to do for them.

May I suggest that the American Type Founders Company, as successor to such honored names as Ronaldson, Dickinson, Johnson, Conner, Bruce, Dalton, Richard Smith, MacKellar, St. John, Marder and others, has, at this period when its activity is so rapidly antiquating the work of its

contribute valuable items to such a collection; and in many old established printing-offices books and documents to complete the historical sequence may yet, before it is too late, be found. I, myself, would gladly contribute some books and files of which probably no duplicates are extant.

Imagine with what interest even the next generation would examine authentic copies of the first specimen sheets and specimen books of the first type made by a White on a casting machine, the first type made on the American point system by



Plate by The Inland-Walton Engraving Company.

WHERE THE SPECKLED TROUT ABOUND.

Grand Trunk Railway System.

Madawaska River, Algonquin National Park of Ontario.

forerunners, the opportunity to do a service graceful to its predecessors and valuable to posterity, by following the example of Mr. Caslon-Smith. What could be more interesting than a collection of all the portraits of eminent American type-founders, editions of all specimen books, examples of obsolete appliances, hand-casting apparatus, matrices of once notable type-faces, old account books, casting machines, molds, and type in the various stages of manufacture as it was made prior to the introduction of the automatic casting machines, all in glass cases, with suitable explanatory and historical data. The descendants of former typefounders would, doubtless, be glad to

a Marder, or the first type made to point set and a standard line by a Schraubstadter; and then imagine how that interest will increase and the value of such a collection be enhanced as the generations pass along. Surely the American Type Founders Company can find a man who would look upon the task of conscientiously creating such a collection as a labor of love—to none other should it be entrusted. Commence the good work quickly, for the grandfatherless iconoclast with his pernicious besom of indiscriminating destruction is at work every day casting these pearls into his swinish ash heap. Is it conceivable that in the old Johnson and Bruce foundries there is not to be



found much that would form a nucleus for such a museum?

Consider also the prestige that would accrue to those establishing it; would they not be building a most enduring monument for themselves, when in a time, not too close at hand let us hope, in this hall of typefounding fame there will be added the names of Phinney, Marder, Barth, Nelson, Benton and — (for let it be broad enough to preserve and reward even competitive merit) — the younger Schraubstadters. Such a collection would be a Mecca, attracting the printers of the world to it, worthy of being well housed; worthy indeed of a niche in the Smithsonian Institution at Washington, a gift to the nation.

However, the important duty of preserving historic data and mementoes of the typographic art in all its branches would better be entrusted to an American Typographical Historical Society, with premises, a library and a museum in New York, in charge of a curator possessing the proper knowledge to fit him for forming a collection and preserving data from all sources, combined with an indispensable enthusiasm for the work. Such a society, supported by the fees of a national membership, under the direction of a committee of veteran leaders, issuing periodic bulletins of its transactions, would attract to itself by bequest or purchase valuable collections which, under present conditions, are dispersed and fall into the hands of people inappreciative of their value.

What have become of the collections of books on typography known to have been collected by George Bruce and his son, David W., Col. Richard M. Hoe, and George P. Gordon, or the "almost unequaled" collection of Franklin portraits left by A. S. Doane? The only authority I know of says invariably "dispersed at his death." And so the long roll might be indefinitely extended. The American Type Founders Company would, doubtless, present the collection it might make to such a permanent society, and so would others I have in mind, thus forming a nucleus of a library and museum. Such a society would lend dignity and do honor to our craft and its practitioners. What man of due reputation and influence will assume the duty and acquire the honor, perhaps never to be forgotten, of originating the American Typographical Historical Society?

[The next article will discuss typemaking in France, Great Britain and Germany, with glances at the influence of each on the type business in America.]

#### FIRST ON THE LIST.

I am taking ten other magazines and *THE INLAND* is first on the list.— *E. Lack, Oakland, California.*

Written for *THE INLAND PRINTER*.

#### THE MECHANISM AND ADJUSTMENT OF FOLDING MACHINES.

NO. V.— BY PHILIP ZACE.



THE setting of the perforating devices is the chief feature wherein the adjustment of the Brown single-marginal folder differs from other machines. The Brown perforators are arranged on a shaft which is geared to and driven by the fold rollers, while the Dexter perforators receive their motion through contact with the fold rollers. The circular knives are keyed to revolve with the shaft, but their adjustment laterally is controlled entirely by the movement of the carriage. When the carriage is extended to receive a larger sheet of paper the perforators slide on the rod and adjust themselves automatically to the grooves. The adjustment of the tapes is similarly controlled. There are "headers-up" or kickers arranged close to each fold stop which regulate the position and proper alignment of the sheet over the bite of each succeeding pair of fold rollers. These must be properly timed with their respective cams.

The adjustment of the slow-down, previously described, in relation to machines of other makes, is also applicable to the Brown slow-down in most instances. In this machine the slow-down consists of a rubber-tired shoe attached to an arm, which

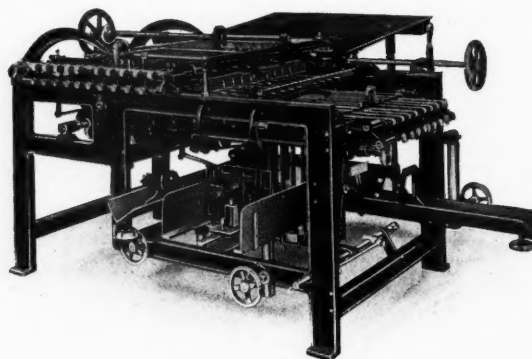


FIG. 21.

revolves on a shaft. The device is often known as an "elephant foot." It must be timed so that the shoe will come in contact with the sheet just before it strikes the first-fold stop. The timing is done by the adjustment of the cam-wheel, as previously described.

Fig. 21 is a cut of the Brown improved "Togo" jobber. It performs its work both in regular and oblong folds and it may be adjusted to handle either six, eight, ten, twelve, sixteen, eighteen, twenty, twenty-four or thirty-two page signatures. There are a number of folders of this class now on the market, each possessing its own





**NEAR HOT SPRINGS, ARKANSAS.**

More water glideth by the mill  
Than wots the miller of.—*Shakespeare.*

Plate by The Inland-Walton Engraving Company.

peculiar advantages. It would be impossible to describe minor details of construction relating to all of these in the limited space allotted to the subject, and the amount of matter necessary to do this would be confusing, rather than instructive. It is true that the operator may be confronted with certain difficulties of adjustment not covered in these articles. With these facts in mind, THE INLAND PRINTER will lend the assistance of its experts to all operators who are earnestly interested. All questions relating to the adjustment of folding machines will be answered either by personal letter or through the columns of THE INLAND PRINTER.

A brief description of the Fuller marginal folding machine will be taken up here in concluding a chapter on the adjustment of convertible jobbers (Fig. 22). This machine will fold eight, twelve, sixteen, twenty-four and thirty-two page signatures—all right-angle folds. The layouts for

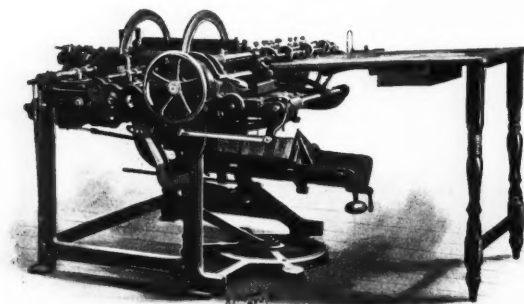


FIG. 22.

these forms are the same as for other machines. It can also be adjusted to make the first and second folds at right angles, and the third fold parallel, making what is known as a "two-on sixteen-page signature"; it will make right-angle first, second and third folds and the fourth fold parallel, thus delivering thirty-two-page signatures two-on. It will deliver first and second folds parallel and a right-angle third fold, making an oblong, or what is known as a "music-fold" signature. This machine also has poster attachments and a complete equipment of perforators which open the edges and heads so that the lightest or heaviest paper can be folded at full speed without a wrinkle. All the improvements, such as side registers, sheet straighteners and sheet retarders, for automatically and perfectly registering the sheet, are also contained in this machine, and the methods of adjusting these devices, as related in describing other folders, are applicable also. By reason of the complete system of perforating, it is possible to fold heavy coated paper into solid thirty-two-page signatures without inserting.

#### SPECIAL IMPOSITIONS FOR SINGLE MARGINAL FOLDERS.

Most stonemen and folder operators are familiar with the regular impositions for single marginal machines. All of these diagrams are shown in the usual layout sheets. A careful study of the folded sheet as delivered by this machine suggests

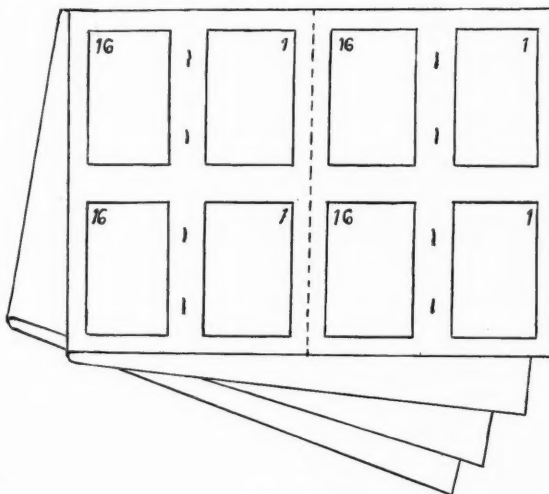


FIG. 23.

means of producing other results by specially imposing the forms. Ingenuity in this respect may increase the capacity of the machine, reduce folding or save inserting, trimming and binding.

Oblong sixteens may be folded on a regular jobbing machine without converting it into a parallel folder by imposing two consecutive signatures after the manner of a two-on make-up. Page 1 of the first signature and page 17 of the

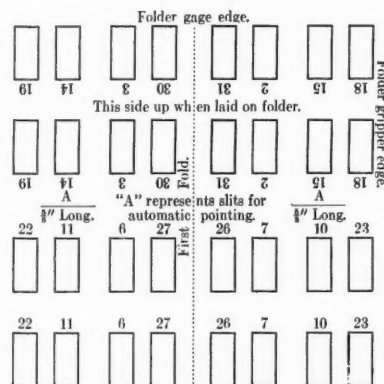


FIG. 24. This represents a printed sheet of oblong 32 pages, two on.

second signature are made up as one upright page and the balance of the form is imposed in a similar manner. The layout is the same as a right-angle sixteen-page imposition for the folding machine. The form will be delivered two-on, to be cut apart and gathered.

In large runs of pamphlet or catalogue work, it is always desirable to print and fold as many forms to the sheet as possible, to the extent of utilizing the full capacity of both the printing-press and the folding machine. It would be

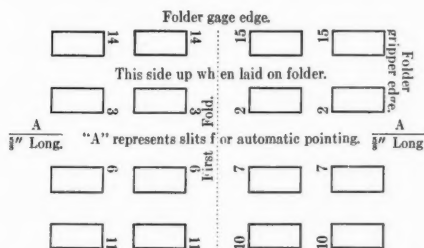


FIG. 25. This represents a printed sheet of oblong 16 pages, two on.

preferable to print and fold a hundred-thousand edition of a small sixteen-page booklet in gangs of four-on at one operation. This can be done on any single marginal machine, if the sheet is not larger than the range of the folder. The form should be made up as an eight to be delivered flat at the second fold. Each of the large pages of this form should consist of eight individual pages of the book, as shown in Fig. 23, a folded sheet. This represents page 8 of the eight-page signature as delivered by the machine. The covers are

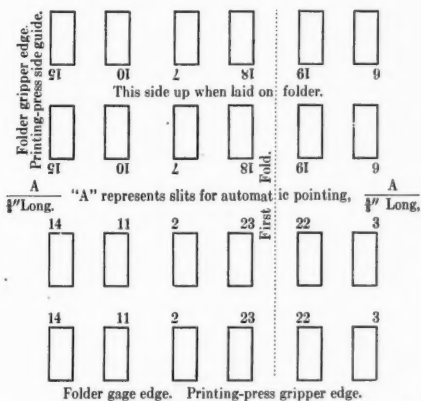


FIG. 26. This represents a printed sheet from an inside form of parallel 24's, two on, book imposition.

printed four-on flat and gathered with the signatures, without creasing. The stapling is done four-on on a flat-bed, wire-stitching machine. The books are then trimmed four-on, cut into two sections on the dotted line and then creased two-on, either by hand or in a creasing machine.

Fig. 24 is a printed sheet of thirty-two pages, two-on, which is also designed to save folding and binding. This sheet is adaptable to a single marginal folding machine.

Fig. 25 is a printed sheet of sixteen pages, two-on.

Fig. 26, a printed sheet of a twenty-four-page form, two-on, is a valuable layout for bookwork

and it presents an economical way of folding calendar pads on a machine. For calendar work the pages are made up in the same order with every alternate page blank. The completed sheet represents two yearly pads. This scheme saves gathering and collating—two important items.

A complete twenty-page form can not be folded on a machine. It should be made up as a sixteen and a four—the row of four to be cut off and folded by hand. To produce this form as a work-and-turn, it is necessary to transpose the outside

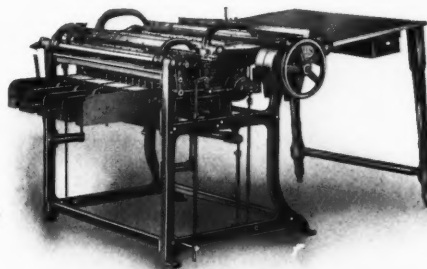


FIG. 27.

row of four pages before the sheet is backed up. A straight twenty, with an infold, is a tumble form and must be folded by hand.

Most railroad folders can be folded on a single marginal machine, with parallel attachments. These forms usually require one or two additional folds by hand, or on a creasing machine. Creasing machines are made for one and two fold work and they are usually designated as circular fold-

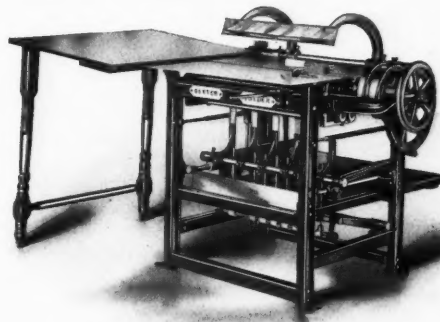


FIG. 28.

ers. They are used chiefly for creasing covers, folding circulars and to make the final fold or folds on special work which can not be completed on standard book folders.

Fig. 27 is a machine of this character, designed to make two parallel folds. It will handle sheets  $9\frac{1}{2}$  by 24 inches to 18 by 28 inches in size.

Thirty-two-page forms are often folded on three-fold machines by making the final crease



by hand or in a creasing machine. Fig. 28 is a 24-inch single-fold or creasing machine.

A sixteen-page signature may be made up to be folded three-on if the pages are almost square. It is difficult to handle deep pages three-on on a folding machine. The layout for such a form is the same as Fig. 25; with another set of duplicate pages added. This is a parallel fold. The layout is also adaptable to single signatures of extra deep

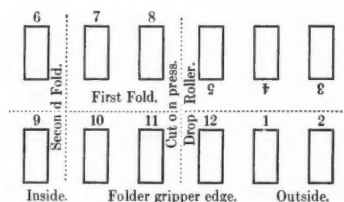


FIG. 29.

pages — a style of page frequently used for price-list booklets.

By rearranging the layout of the pages, the preceding fold may also be converted into a special deep twelve-page folder, which can be worked on a single marginal machine (Fig. 29). Twelve-page signatures, two-on, may be produced by this same fold. Signatures of this character must be side-stitched.

(To be continued.)

#### MISTAKES OF AUTHORS.

Dickens was by no means infallible. He put the new moon in the east in the evening; he came to grief over the Dingley Dell cricket match; he made Tony Weller's second wife Sam's mother-in-law; and he described how, in the depth of winter, Mr. Squeers set his unfortunate boys hoeing turnips. That delightful modern humorist, Mr. Pett Ridge, in "Lost Property," makes one of his characters deposit ninepence in the Post Office Savings Bank, forgetting, for the moment, that only even shillings will be accepted; and in another book has written of cricket, in which there were "cuts" and "drives" to leg. Sir Conan Doyle, in one of his best Sherlock Holmes stories, makes a scheming lawyer draw up a will in favor of himself — a proceeding which would make the document invalid. The late John Hollingshead, in "The Story of Leicester Square" perpetrated a glorious bull, writing, "When Lord Mohun was killed he was living in Macclesfield House, Gerard street, Soho, at the back of Leicester House, a site now occupied by the defunct Pelican Club." Even Sir Walter Scott made blunders, and in his fine ballad of "Young Lochinvar" he has this passage:

So light to the croup the fair lady he swung,  
So light to the saddle before her he sprung;

which is a feat of horsemanship utterly impossible. — *T. P.'s Weekly*.

#### ANTE UP!

Just one minute — the astronomers tell us that a monster comet is heading for the earth with the speed of an express train. Only a few days remain in which to pay your subscription to the *News* — we don't want to have to trot all over hell to find you. — *Andalusia News*.

Written for THE INLAND PRINTER.

#### MODERN BOOKBINDING.

BY A. HUGHMARK.

NO. XVI.—CATALOGUE AND PAMPHLET BINDING.



MODERN advertising literature has grown both in bulk and variety within the last few years to such an extent that special binding methods have become necessary for the preservation of this class of work. The object of these bindings is not only to hold the sheets together in the cheapest possible manner, but to do this in a way that will prove attractive in itself.

The simplest form of pamphlet binding is the one known as saddle-wired; but even here there is a chance for good work. The stitches can be made to clinch evenly and fit snugly in the fold, distributed at proper intervals from each other so as to hold the sheets firmly all along the line of the back. The trimming can be done so as to show proper margins and absence of clamp marks. The folding should always be in register, even in cheap printed matter. When trimming in a cutting machine, the side gage should be used for the ends — the leaves must be square. No pamphlet binder that cares for his reputation can afford to send out work that has the top and bottom of each bunch, as it comes from the machine, fingermarked or otherwise soiled, or that shows rough edges from a badly marred cutting stick. It takes but a little time to cut up enough waste for a particular job to use as protecting sheets on each side of the bunch before cutting.

Oblong pamphlets or those that have covers containing rule designs require great care in trimming. It must not be taken for granted that the printer has made the covers fit to the body matter; even if he has, they might have been fed in badly or the guide might have slipped after final O. K. All covers should be measured in the bindery, in every instance, both as to width and length of its design, compared to the type-page of the body. Any defect of position can be remedied before they are folded by cutting off the head margin or one side, or, as has happened to the writer, where the sheets had to be trimmed off at the top before inserting into the covers.

In the case of extended covers, the body is trimmed before stitching so that the cover will extend at least one-eighth of an inch all around. The inside is then inserted into the covers and jogged up evenly on one end. The stitcher-operator adjusts the cover when picking up for the stitcher. When silk floss or knitting silk is used, each bunch of books is marked by scratching a line at the beginning and end of the stitch. This



insures a uniformity in the length of all stitches. Side-wired books are covered by gluing the backs of the books in a stack and then taking each one and laying it parallel to a mark, either printed or sawed, indicating the back. The thread-sewed book is covered in the same manner by wrapping the cover around the back of each, after which the backs are well rubbed and the books stacked up squarely. The best covering for this class of work is done by pasting, or more correctly, gluing the covers down on the sides. The covers have to be scored in four places, two scorings for the thickness of the back and one scoring on each side of the back for a glued-down hinge. The width of these hinges should be enough to cover the wire staples, leaving nothing to show but a clean joint and leaf when the cover is thrown open. A good method to use for this kind of covering is to have two girls work together, one taking a few books and running them out slightly before gluing off the backs. The glue will then run in a little on each side, enough for each hinge. The backs should be held down firmly by means of a strip of board laid across the top while rubbing down. That will also help to tack down the scored hinges.

After the books have been in a stack long enough to dry, each book should have its covers folded back. If any of the covers during this process should open up beyond the hinge, this should be tipped down by inserting a glued strip and then withdrawing the same while pressing down on the cover. A sewed book, having its first and last sections reinforced before gathering and then covered in the above described manner, will be as strong as a hard bound book.

The ordinary cotton strip reinforcing is both unsightly and useless; it serves to hold the cover to the first leaf only, and as all the strain is thereby put on that one leaf, it soon tears away from the book. Then, too, this kind of work can not be done with uniform neatness; the finished book very often contains strips with unraveled edges or some that are loose in different places.

Others will be laid on unevenly and many will show paste spots on the inside of cover or on the books.

Punched and cord-tied books can be either gathered or inserted. If they are gathered, it is better to side-stitch them with one staple first and then glue the backs, covering in the usual way. The books are then firm in the covers and can be punched for cord complete in one operation. Cord-tied books are always hard to open and especially if they have stiff covers. It is therefore best to score the covers with a wide enough hinge to allow for the holes and cord. The covers will not only open up more freely, but the reading matter will become more accessible.

Paper-covered books, sewed and provided with end-sheets for pasting up on the covers, should be glued up on the backs with thin glue and pounded down before covering. If the covers are to extend over the edges, the book should be trimmed to the proper size before covering. A mixture of paste and thin glue is the best to use for pasting



RUSSIAN CARPENTERS AT WORK.

up. Embossed covers can not be pressed without mashing in the raised impressions, and in such cases, each side will have to be rubbed down by hand, after which the books should be laid between strawboards to dry out smooth.

With cut-flush work the pasting up should be done before trimming. Flexible cut-flush cloth covers consist of pieces of cloth wrapped around each book, without boards. The books are sewed, end-sheeted, glued up and hammered down with slight rounding. If the covers have to be printed, this should be done on the unlined cloth first. When these have had time to become thoroughly dry they are laid up and glued off the same as for casemaking. A small stack of books are glued again on the backs with thin glue, after which the glued off cover-piece is laid on and drawn over tightly. When ten or twelve are covered they should be put into a small hand press and nipped, then taken out and rubbed down on the backs and finally spread out between strawboards to dry out.

The most reliable method to follow when covering books that have printing on the cloth is to fold the cloth covers in the center and leave them open, thus giving each piece a crease that will correspond to the center of the book back. The end-sheets best suited for this purpose should be of a good weight and dull finish. The fibers of the paper should run crosswise of the warp in the book cloth, to prevent warping or curling.

In connection with pamphlet and catalogue work, it should be borne in mind that buckling of any sheet in the third fold will spoil the appearance of the book. Be careful in folding to have running heads, if any, register; otherwise register the folios. Do not break highly finished paper when taking register for folding. In cutting up sheets for folding that have four pages to wrap around eights or sixteens, these should be cut to register at the head.

Do not clinch the wire staples too tight on enameled stock that is saddle-wired, because the inside fours will tear out when the pamphlet is opened. Do not let the paste run into the book when sewing, nor the glue when covering. Clip off the loose ends of the threads after sewing before covering. Smash all paper-covered books before and after sewing. Use waste leaves to protect work printed on fine paper on the outside of the bunches after gathering, sewing, smashing and cutting; when covering take them off after the books have been glued off.

Two-piece covers for side-stitched books should have cotton or book-cloth strips pasted on the inside edge of each cover. This is done by running out the covers as for tipping and after pasting off a small lot the strips are laid on each, and all of them rubbed down. These strips should be three-

quarters inch wide and by sawing in an indentation in the covers one-quarter inch from tipping edge, at each end, uniform tipping gages are secured for the whole lot. These covers are again run out and pasted on the stripped sides for tipping on to the books.

Two-piece covers for machine-sewed books are reinforced in the same manner, but instead of tipping the covers on top of the first or last forms, as for side-stitching, they are in this instance tipped around the signatures; in other words, the cloth strip is tipped on the back edge of page sixteen of the first signature (if made up in sixteens) and wrapped around the back so that it covers the title or first page. When the book is sewed the needle passes the threads through the reinforcing, thus making the cover a part of the signature. It will also open up to the back freely after the cloth back is drawn over the outside.

(To be continued.)

#### WHEN I WAS A KID.

When I was a kid I served a term  
As roustabout in a printer's firm.  
I washed the rollers, and I mopped the floor,  
And I put the dirty water o'er the sanctum door.  
I balanced the pail so carefuller  
They gave me the ruler where it hadn't ought to be.  
(Repeat the last two lines staccato.)

P. S.—The Boss bought a new suit.

I put a pillow beneath my vest,  
And somewhere else—you may guess the rest.  
I pulled the proofs on the old hand press  
And mixed the "takes" in a lovely mess.  
I mixed them up so fine and free  
They dusted my clothes quite thoroughlee.  
(Repeat, somewhat sustained.)

P. S.—The comps. also dealt me a hand or two. Clubs trumps.

In course of time I learned the case;  
Each little type in its little place.  
The very first time I filled my hand  
I threw it in to beat the band.  
I filled that minion case so quick  
I made all former records sick.  
(Repeat, making a noise like a pied form.)

P. S.—It was eight-point at that, too.

I kicked the Gordon and I wrapped the mail,  
And I dumped the paste in the old lye pail.  
I washed the forms when the run was through,  
And rinsed them off with Le Page's glue.  
O, I rinsed them off so thoroughlee  
They spent a week in looking for me.  
(Repeat, loud as possible.)

P. S.—They threw it in with a hammer.

They showed me type lice in the face,  
They sent me for an italic space.  
I found it on a tamarack  
And brought it back in a canvas sack.  
I threw the sack upon the floor,  
Then bolted out and locked the door.  
(Repeat, in full chorus.)

P. S.—O yes, I forgot. It was a hornet's nest.

Now devils all, you may take it from me,  
If you want to rise to the top of the tree,  
Forget your past, resplendent though it be,  
And drive it out of your memoree.  
Forget your past when you lay it away,  
For you may be foreman of a shop some day.  
(Repeat, *ad lib.*)

P. S.—Capital punishment of devils is discouraged.

—Bent Twigley, in *Wescl's Message*.

Written for THE INLAND PRINTER.

## COMPOUND WORDS.

BY F. HORACE TEALL.



NOT only is there much difference between different publications with regard to compounding, but the confusion is as old as the language and will probably last as long as the language does. Nevertheless, most people, and especially printers, prefer some sort of system. It does not seem likely that any printer would object to having a practice established that would obviate the necessity of frequent corrections in type, and it does seem likely that all printers will assent to the assertion that such a practice must be based on analogies that everybody can understand and apply with the same result. How can a reasonable practice be secured?

The greatest difficulty lies partly in the fact that most persons will not take the necessary trouble to study the subject, and partly in the fact that uniform practice is not demanded in the interest of clearness. It is only in the printing-office that such matters of form have any real importance, for of a thousand terms that cause question perhaps more than nine hundred can be read with only the one understanding of sense no matter what form they have. This makes matters just so much worse in a printing-office where any care is exercised as to compounding, especially in one with two or more proofreaders, unless a very full list of forms is taken as a guide and closely followed. Such full lists are not in existence anywhere outside of the big dictionaries, except, so far as we know, in one book that comparatively very few people will follow closely, because it uses many more hyphens than the people wish. Before inquiring why that is so, let us see what is the difference between the dictionaries, which are selected for such comparison mainly because so many grammarians dismiss the question merely with a direction that one who wants to know in what form to write a term should consult the dictionary.

By far the largest number of terms in doubt are pairs of nouns. Many people think, as John Earle says, that mere position before another noun converts a noun into an adjective. Many others hold that under certain conditions, depending on the nature of the word-meaning, the first of the two retains its mere naming function, and the two together form a compound noun. The International Dictionary uses the forms that support the first of these opinions, and the Century and Standard use the other forms. The International, however, occasionally yields to what might easily

be proved a false conception of the demands of usage, and joins the two nouns with a hyphen, and more frequently makes one continuous word of them, so that one taking that dictionary as authority would, if he really followed it, write with such confusion as dining room, drawing-room, countingroom, sewing machine, shoeing-horn, laughingstock, bell bearer, armor-bearer, cupbearer, and even such conflict as gold beater and gold-beating, and sea mell and sea-mew, merely different forms of the same word. Every one of the terms here instanced has a hyphen in the other two dictionaries.

This reference to the International is not written as faultfinding, but simply to show the variance in policy of the different works, and almost as much to note the great comparative frequency of hyphens in the other works.

For some occult reason, aversion to the use of the hyphen is very common. This aversion can not be universally based on æsthetic grounds. Certainly some people do say that frequent hyphens spoil the appearance of print, but many others find nothing worse-looking in them than in any other character or mark. Very likely the underlying fact is that the use of hyphens is thought to be too troublesome. Whatever may be the preference of any one, undoubtedly all practical printers will agree that it is comfortable and economical to have in the printing-office a practice that all the workers can apply with like effect, and this is nearly all that is possible of attainment. Even so much can be done only in one way, namely that of having at hand a record of all forms chosen for use. Practically every style-card or style-book ever made contains a rule or direction with regard to compounding, and absolutely every one of them is utterly inadequate. One was never made that did not leave thousands of terms open to question, with the result that different proofreaders mark in different ways, and even one proofreader who does not vary in his marking at least slightly is hard to find. Thus it is a very common occurrence that the compositor who learns to-day, through the proofreader's marks, that a certain term should have a hyphen, has to take out that hyphen to-morrow, and then of course he is not sure which way it will be next time.

A recent grammar, claiming to be the most scientific one ever made, gives in its preface a striking exemplification of the difference in opinions as to word-classification. Its author says that in speaking to a meeting of philologists he incidentally said that "cannon" as used in "cannonball" is not an adjective, and some one answered that of course it is not, and no one could possibly assert that it is. A noted teacher and author of



grammar-books thereupon said that the word is an adjective, and it surprised him greatly to find any one who could think otherwise. When scholars can so markedly disagree on such a point, of course others will do so, for each kind of thought inevitably attracts a large following. But these two ways of classifying indicate a large body of consistent practice for each of the two schools, one favoring compounding and the other separation. Besides there are many people who try to decide by usage each term that is questioned, and

method than he says it is. It is altogether likely, however, not only that no two persons would make independently lists that agreed all through, but also that no one person, having made a large list, would repeat the forms of that one exactly in making another without the first at hand for reference. Of course this would not be so if the list were merely copied from a dictionary.

No method depending on memory can possibly work as satisfactorily as one formulated in a full record. No record can possibly be made that will



Plate by The Inland-Walton Engraving Company.

Grand Trunk Railway System.

CAMPING IN ALGONGUIN NATIONAL PARK OF ONTARIO.

this can never be done with any real assurance, because there is no determinative usage.

Benjamin Drew came close to truth when he wrote: "To search for authority in the matter of compounding words will avail next to nothing. . . . In regard to compounding (by which we mean inserting the hyphen between the parts of a compound word), the proofreader is left to his own discretion, and can do very much as he pleases. He should, however, adopt some method by which he can approximate to uniformity in his own work; for as to agreeing with anybody else, that is out of the question."

This is not quite true as to agreement, for the lack of it is a little less extreme as to general

suit everybody. No person can make a record without exemplifying some one of the possible methods. What, then, can be done?

The list spoken of above contains forty thousand terms, all given, of course, with the form its author prefers. A proofreader having a copy of it, and using it freely, need not think he is bound to accept all of these forms, but, on coming to one that he or his employer does not like, he could mark a change in the book and thus soon have a record of all decisions made for his practice. He would thus have an excellent drill without much effort, that would soon make it almost impossible for him to vary in his marking, as many do, to the cost of compositors and employers.



Written for THE INLAND PRINTER.

# PHOTOGRAPHIC WATER-MARKS.

BY RUDOLPH HENRY.



HIS title will no doubt convey to many readers a medley of impressions, especially in America, but in Europe the subject is in itself not new. It has recently come before the public in an interesting manner through a paper on "The Development of Water-marking in the Hand-made and Machine-made Papers," presented before the Society of Arts, London, by Mr. Clayton Beadle, on May 16, 1906. Mr. Beadle's paper gave a thorough exposition of the different steps incident to the formation of water-marks, from the earliest inception to the present day; his paper is replete with historic and technical interest. The explanation of the province of the "dandy" rolls in machine-made, and the mold of hand-made, papers is extremely interesting and instructive to the novice, as well as the professional. Many historic specimens were shown and a particularly up-to-date method of exposition was presented to the auditors of the meeting by Messrs. T. J. Marshall & Co., who had a complete working model in miniature of a papermaking machine.

The portion of the paper relating especially to the present subject was brought out in the discussion that followed its reading. At that time Sir Henry Trueman Wood, secretary of the society, called attention to the existence of a quasi water-marking method for the production of such effects in *graduated* tones, through the medium of "Woodburytype" molds, formed photographically.

Sir Henry said, it might be interesting if he supplemented the details of the paper by referring to an invention, which was now nearly forgotten, for the production of a kind of spurious water-mark by photography. The late Mr. Walter Woodbury, well known as the inventor of the Woodburytype process, suggested a means, many years ago, of producing apparent water-marks on paper. The process he adopted was the use of what was known as a gelatin relief, the meaning of which photographers well knew. To those who were not familiar with photographic processes it might be sufficient to say that it consisted of a film of hardened gelatin, in which the lights and shades of any photographic picture were reproduced by varying thicknesses of the gelatin. When such a film was placed in contact with a sheet of paper, and the two were subjected to heavy pressure, the result was that the paper was more impressed where the gelatin was thicker, and less impressed where it was thinner, and a picture exactly like a water-mark, representing

the original photograph, was produced. He believed that when the invention was first brought out bankers and others who depended upon water-marks were rather concerned about it, because they considered it might lead to forgery. As a matter of fact, however, when the paper, the "photofiligrane," as it was called, was damped, the whole thing disappeared, and the minds of the bankers were no doubt thereby relieved. He did not think the invention had any practical application, and doubted whether it was ever of any great value. It was certain, however, that any photograph, however complicated, could be reproduced on paper in the form of an ordinary water-mark. He thought it worth while to mention the invention, because of the extreme ingenuity which was exercised. He thought it would be of interest if the author could state why "water-marks" were so called, because they did not seem to him to have anything to do with water at all, but were merely marks made on paper in the course of manufacture.

By way of interpolation, anent Sir Henry's query regarding the word "water-marks," Mr. Thomas A. Marshall thought the term "water-mark" originated from the fact that the water left the pulp in the process of manufacture where molds were used, in which suction was employed, by the action of lifting the mold from the pulp; and in a machine the mark was impressed by the suction of water through the vacuum boxes.

Others of the auditors enlivened the discussion by remarks bearing on the various phases of water-marking.

Mr. Beadle, in reply, said he was much interested in the remarks made by Mr. Spicer, chairman of the London County Council, who referred to the lack of individuality in modern water-marks. He thought it was somewhat unfortunate that so many of the present-day marks consisted merely of names, and that the beautiful devices which were still in existence, connected with different sizes of paper, were not more frequently used. If the general public were better acquainted with the fact that the sheet of paper on which they were writing bore a water-mark design, probably there would be a greater encouragement for papermakers and stationers to introduce artistic designs, and to vie with one another in so doing. With regard to Sir Henry Wood's remarks on Woodbury and his process, he thought it possible that if one took the definition of water-marking as being the act of imparting to paper a distinctive mark in the course of manufacture, it would be impossible to employ the Woodbury process in that manner. It was difficult to discover at what period water-marks were so described, but in Sotheby's and other books of that period the mark

was described as a paper-mark, and as late as 1855, in Herring's book, occasionally he talked about a paper-mark, and at other times about a water-mark. He did not know when the name "water-mark" was first applied, but he thought it was very appropriate, because it was only possible to produce a water-mark in a paper while the paper was in a very wet condition, and while it contained a great deal of moisture. When once the moisture was removed from the paper, the fibers, once and for all, retained their relative positions; but when the paper was still in a wet condition, if some design or device was placed in contact with it, the fibers could be laid aside and so produce the water-mark: in other words a water-mark could only be produced in a paper when that paper contained a good deal of water; and when once the water was removed, that mark became indelibly fixed in the paper for all time, and no amount of moisture would have any effect upon the fibers. With regard to Woodbury's process, the moistening of paper after it had been embossed, stamped, or otherwise treated after it was completely made, would restore the paper to the condition in which it existed at the time it was first manufactured. Thus if paper was glazed, and dipped under water, the glazing came right away, and the paper swelled up to its original thickness, just as it came away before it passed under the glazing rolls. Although the fiber might be made to lay down and produce a lovely gloss and luster by mechanical means after it was made, still it had an inherent power of rising up and restoring itself to the condition in which it existed before any mechanical process was applied to it. He could quite understand that beautiful effects were obtained by Woodbury's process, which consisted in compressing the paper at different points in varying degrees, the compression of the fibers producing a greater transparency, and the amount of compression varying the transparency to almost an unlimited degree; and no doubt it ought to be capable of useful and artistic treatment.

In the *Journal of the Society of Arts*, of May 25, 1906, under the correspondence section, addressing the secretary, Mr. J. Melrose Arnot says: "I have been deeply interested by Mr. Beadle's paper on 'The Development of Water-marking in Hand-made and Machine-made Papers,' and particularly by your own reference to the Woodbury process, or 'photofiligrane,' because I was not previously aware who had originated this beautiful method of producing designs resembling water-marks in paper. You express a doubt as to the invention having any practical application; but here, apparently, as in so many other instances, we find a Britisher making the fundamental discovery and the application of it benefiting some continental

country only. This process is used pretty extensively in this country and Austria, and I have seen many examples of most beautiful and artistic work, not executed merely for the pleasure of the thing, but on the commercial scale. Many of the best German, Austrian and Italian note papers of the qualities most in demand are so marked. The gelatin relief is made on stout, tough cardboard (of course any number can be produced cheaply) and passed together with the paper to be impressed through a machine very similar to a plate-glazing calender."

Mr. Arnot further says that for simple designs in linework, a substitute for the gelatin relief was sometimes used, in which threads, different thicknesses of paper, etc., were pasted to a suitable foundation of cardboard and the whole covered with a thin protective sheet. He also referred to the fact that Mr. Beadle had held strictly to his definition for the purposes of his paper; but between the real "water-mark" and the Woodbury process there lie gradations which belong more or less to both classes.

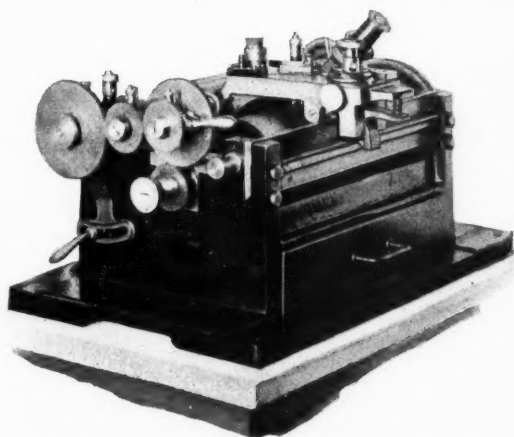
One method, having a dual interrelation, is of German origin, and is largely used in England. It is covered by Behrend's German Patent No. 149,174 and consists of a series of small type-wheels which bear the letters or the design that are mounted above the top roll of the second press where they rest on the still very moist paper at the point of its closest contact with the roll underneath. The type-wheels are held on the moist paper by weighted levers so that they rotate with the band of paper, and because of the pressure being variable, due to a variation in depth of characters, the moist paper is thinned more or less according to the design. Papers so marked are found on examination to have their fibers displaced somewhat, as when dandy rolls are used. Mr. Arnot says he has also produced similar results on the first and second drying cylinders of the machine.

Apropos of this interesting exposition, it will be of interest to the trade in general to learn from the accompanying illustration that an automatic "mold" producing machine, which enables any printer having an embossing press to turn out quasi water-marked effects, has been perfected and built for the market. This machine is compact, about 11 by 18 by 10 inches in size, and it is driven by suitable belting connection or a one-twelfth horse-power electric motor. The machine is not experimental, but an actual practical device that has been brought out by Mr. N. S. Amstutz, of Chicago.

The province of the machine is to enable the printing craft to produce all sorts of photographic relief effects on their regular papers without

recourse to the paper-making stages, referred to in the previous portions of this article.

Mr. Amstutz has spent many years in the development of this device and has gone into the investigation of a simple production of gelatin reliefs in a critical manner. He has, in the course of his researches, found the law relating to gelatin composition sensitized with bichromate salts, and the resultant relief under various light intensities and distances and times of photographic printing. He has produced "home-made" tissue that eliminates the removal of the usual paper support of commercial carbon tissues. While Mr. Amstutz does not claim anything fundamentally new in the production or use of his special tissue, it does however simplify the production of a gelatin



AMSTUTZ'S MACHINE FOR CUTTING WATER-MARK MOLDS.

relief. In the ordinary course of things any good commercial tissue can be used, one that has a good body of gelatin with much less pigment than is usually found in carbon tissues. That put out by the Autotype Company, of London, known as "Woodburytype," is easily manipulated and gives good reliefs of from .002 to .0025 inch.

The method referred to by Sir Henry Trueman Wood is really the "Woodburytype" process adapted to "water-marking" purposes. This process is based on the interesting fact, discovered by Poit vin, of Paris, in 1855, that when a stratum of gelatin is impregnated with a bichromate of potash solution it becomes sensitive to the action of light; where the light acts strongly the gelatin becomes hard, in fact, insoluble; where there is no light action it remains soft or soluble, and where the light has acted partially, a proportionate hardening effect ensues. When such a film is washed in hot water at about 110° F. (43.5° C.) the soft or soluble portions wash away and leave the hard parts remaining on the supporting film, which may be of any suitable character. This film with its attached relief, when the gelatin is dry,

becomes a mold with which the beautiful Woodburytype photographic effects are produced by impressing the gelatin mold into a sheet of lead. On a suitably surfaced paper a given quantity of colored liquid gelatin is placed and on top of this the lead mold with its impressed face downward. The paper with its pool of warm gelatin is, of course, placed on a perfectly flat and smooth plate so that when the lead mold is pressed onto the warm gelatin the surplus is squeezed out, leaving within the "safe edge" margin walls of the mold a quantity of the colored gelatin that, in thickness, is directly proportional to the light action of the photographic negative from which the carbon print was made. As soon as the gelatin has set, the mold is removed and the print trimmed and mounted in any suitable fashion.

It should be observed that the variation in thickness of a colored medium is the means employed to translate or interpret the variable intensities of discoloration of the photograph or negative.

The use of the gelatin relief or lead mold, unless a very thick electrotpe shell is made therefrom, is limited to rather soft materials. It is here that Mr. Amstutz's device comes into practical use, as his machine prepares, in an automatic manner, celluloid replicas of gelatin or other reliefs that will stand any amount of pressure for either dry or moist embossing, so that the practical advantages of photographic water-marks can be secured by all the allied graphic arts crafts. Duplicates are made in from two to five minutes; in fact, the production of the first replica does not require any greater time.

The process is exceedingly interesting and it possesses no small amount of scientific novelty. The device is substantially similar to the engraving machine Mr. Amstutz exhibited at one of the conversaciones of the Royal Institution of London in 1899. It is what might be denominated an engine lathe adapted to reproduce photographic subjects. In fact, Mr. Amstutz did demonstrate the possibility of this kind of reproduction in Paris in 1903, when with simply a supporting drum to hold the gelatin relief under an overwound celluloid film he actually engraved a photographic subject on an ordinary lathe, using a V-shaped screw-threading tool in the tool post with which to do the grooving or engraving. The device has also been referred to by scientists as doing for light what the phonograph does for sound.

In brief, the mechanism consists of a rotating drum on which the relief and reproducing sheet are secured; adjacent to the cylinder is a laterally traversing carriage which is adjustable vertically so as to bring an attached engraving tool closer to



or farther from the drum. The carriage is caused to traverse lengthwise of the drum by means of a feed screw which engages a spring nut of the carriage. The ratio of the velocity of rotation of the drum to the speed of carriage traverse is controlled by removably interconnecting gears, reaching from the feed screw to the drum shaft.

The adjustment of the cutting tool is under the control of a micrometer screw which shows the amount of the adjustment directly in ten thousandths of an inch. A medium-power microscope with a miniature incandescent lamp placed adjacent enables the operator to examine the effects of the adjustments while being made.

Mr. Amstutz found great difficulties in procuring drums that were parallel and truly concentric. After spending much time and investigation on the matter, through attempts to grind the drums with special grinding fixtures, he hit on the happy expedient of making a veritable lathe out of the machine itself and allowing a tool held on the carriage to true up the drum while all the parts were in their regular operative relation or position. At any subsequent time should a drum become damaged by indentations, a half-hour will again put it in as good shape as when new.

As showing the remarkable sensitiveness of the machine, beautiful transparencies have been made which comprise in their production some very novel features, and it is believed work of this class was never done before. A sheet of transparent celluloid or pyralin of .005-inch thickness has cemented thereon another sheet, somewhat thinner, of any suitable color, the two forming when dry an integral part, the one of the other. Such a sheet is placed, colored side up, over the gelatin relief and held on the drum by means of suitable fastenings. The cutting tool is then set down just far enough to cut through (but no more) the colored sheet radially opposite the highest elevation of the photo relief underneath. This forms a high light, and opposite those portions of the relief that are of a lower elevation the colored sheet is cut away proportionately less, varying with the tone values of the original photograph. The drum rotates at about 120 revolutions per minute.

Here, then, is a lathe-produced photographic reproduction possessing all the subtle variations in tonal values of the original, formed by a subtractive method, that by cutting, removes the pigment from out of the reproducing sheet, instead of putting it on, as in most of the existing methods.

This transparency method might be used to advantage in the production of three-color work by cutting three colored sheets and superimposing them. Gelatin films can be used as well as celluloid if the precaution is taken to have them made

with a small amount of glycerin, which will prevent their breaking or cracking when they are to be fastened to the drum.

These machines, specifically adapted to the uses outlined, are constructed and ready for the market, and it is believed they will find a large field of usefulness as soon as their substantiality and simplicity are understood by the trade. They open up a considerable field, at present not extensively occupied, and when placed in the hands of a resourceful operator will produce a great variety of novel results.

#### LONDON PHOTOGRAPHIC EXHIBITION.

The Royal Photographic Society of Great Britain will hold its fifty-first annual exhibition this year from September 20 to October 20, at the new gallery, 121 Regent street, London, W. The scope of the exhibition is disclosed in the following schedule:

- I. Pictorial photography.
- II. Scientific and technical photography and its application to processes of reproduction.
- III. Invitation collection of technical photographs and apparatus.
- IV. Professional photography.
- V. Photographic apparatus and material.

American photographers have not heretofore availed themselves, as freely as they might have done, of the advantage to be gained by placing their specimens on the walls of the Royal Photographic Society salon.

The exhibition will be opened on Wednesday, September 19, by a private view, which is to be followed in the evening by a *conversazione*. The Selection Committee makes no distinction between members and non-members, professionals or amateurs; this allows a free field for all, with favors to none. Entry forms can be procured from the secretary, Mr. J. McIntosh, 66 Russell Square, London, W. C.

Sections IV and V do not admit exhibits for competitive display and a charge is made for space. No exhibitor can submit for selection more than six photographs. All exhibits must, if in packing cases, reach the gallery, 121 Regent street, London, W., by September 5.

#### COURTSHIP IN CAMERA.

She gave him a cabinet photo;  
He gazed for a moment or two,  
Then pleaded: "Sweetheart, won't you give me  
The lovely original, too?"

"If you're *positive*, dear, that you love me,"  
She said, through a *film* of tears,  
"A *negative* I can not give you;  
I'm yours to the end of our years."

So the courtship was quick to develop  
Their marriage was *fixed* up in town,  
And now in a middle-class suburb  
She is steadily *toning* him down.

— Camera House Journal.

#### BLANK VERSE.

"Good morning, Mr. Austinburne," said the editor, as the poet entered the sanctum. "Some more of your blank verse, I suppose?"

(We use the word "blank" that we may not shock readers by repeating the real expression made use of by the unfeeling editor.) — *Kansas City Independent*.



Written for THE INLAND PRINTER.

# THE STUDY OF ELECTRICAL PRINCIPLES SIMPLIFIED.

BY A. STAPHE.

## NO. IV.—MAGNETISM.



HERE is no phase of interest in matters electrical so great and far reaching as that which concerns magnetism. In considering some of the historical and fundamental features of the subject, it is interesting to know that the ancients were familiar with the attractive power of rubbed amber and they were also acquainted with the

Asia Minor, Magnesia, situated on the river Maeander, almost directly east, across the Ægean Sea, from Athens. At this place hard black stones (*magnes lapis*) were found which possessed the property of attracting to themselves small pieces of iron. As was their wont, the ancients called the mysterious things magic-stones, and because of this wonderful property these stones became very celebrated.

The name really goes back farther than Magnesia, which was a flourishing city six hundred years B. C., for it was founded by Thessalian colonists from the province of Magnesia on the east coast of Thessaly just south of the present



Plate by The Inland-Walton Engraving Company.

Grand Trunk Railway System.

A TRUE STORY OF THE FISH THAT GOT AWAY.

Algonquin National Park of Ontario.

properties of lodestone. The compass, without which modern maritime interests would be in a sad state indeed, as is well known, depends on magnetism to direct the needle in a north and south direction. The exact date of its origin is shrouded in the uncertainties of the past. It is, however, hard to conceive of an invention that has had a greater effect on the arts and sciences than that of the magnetic compass.

The name *magnet* owes its origin to a place in

Greek city of Salonika. These colonists were a part of the Greek tribe known as Magnetes.

The Greeks and Romans studied the peculiarities of lodestones (commonly, erroneously spelled loadstone). This name really means "leading-stone." This magic stone of the ancients is nothing more nor less than magnetic iron ore, known as *magnetite*. It was not until about the eleventh century that it became known that if a lodestone of elongated form was suspended from a string it

would swing into a north and south position. Lodestone, as an ore, is found in many parts of the world, among which is the Island of Elba, Sweden, Spain and Arkansas.

Magnetism is permanently acquired by steel, after having been in contact with a lodestone. This is known when the steel is dipped into iron filings, by reason of their clinging to the ends of the steel bar; none of the filings adhere to its center. If such a bar is hung on a thread, fastened midway of its length, it will point due north and south.

Prior to 1600, little more than the facts related were known about the magnet. During this year, Doctor Gilbert, a citizen of Colchester, and resident of London, England, published his famous book, "De Magnete." He discovered, by pursuing his observations in a scientific manner, that magnetism was found concentrated at the ends of a bar; these he called poles, and the middle position, where there was no manifestation of magnetism, he named the equator and the imaginary lines connecting the poles were denominated the axes.

In order that magnetic phenomena may be studied, a magnetic needle is used, which is made from a thin, flat piece of hardened steel, pointed at both ends. A small brass or jewel cup is secured at its center and the whole is supported on a needle point so that it may be free to swing under the influence of the earth's magnetic pole with as little friction as possible. The needle is made magnetic by being rubbed against a lodestone or magnet.

If the magnet is an iron bar, it will retain magnetism only so long as the lodestone is in contact with it, but a bar of steel will retain the magnetism it has acquired from the lodestone or another magnet; for this reason it is called a permanent magnet. Such magnets are usually bent into the shape of a horseshoe, and when so formed are called "horseshoe magnets." A "keeper" or armature, which is a piece of soft iron, is kept in contact with both poles of the magnet so as to conserve the magnetism in the steel horseshoe. At any event, such is the usually accepted *raison d'être* of the armature.

Remembering that one end of the magnetic or compass needle always points north and the other south, it will be easier to understand the law which says that like poles repel each other and unlike poles are attracted the one to the other. This is demonstrated very simply by suspending a bar magnet from a string and noting which end swings to the north; then with a bit of paint, color this end red. Proceed the same way with a second magnet, making sure that the first magnet or any steel tools, etc., are removed a considerable distance. Instead of a second bar a compass can be used. If two bars are employed, the one is allowed

to remain suspended from the string and the other one is brought toward it in such a manner as to first present the red colored ends near each other, when they will be repelled. These extremities are called north-seeking ends and are usually marked + or N, though this is not uniform and in consequence considerable confusion ensues. Technically, the end of a needle or bar that seeks a north position is not a N (north) pole, but a S (south) pole, because, since dissimilar poles attract each other, the real north geographical or magnetic pole of the earth attracts the south pole of the needle or bar magnet. Popularly, the north-seeking end has come to be called a "north pole" and a south-seeking end, a "south pole," which is just the reverse from the conditions imposed by the law of like and unlike poles.

Just what magnetism is can not be stated; it is, however, supposed to be interrelated with the vibrations of what is called the luminiferous ether. In former days it was supposed to be a fluid, but Prof. Sylvanus P. Thompson says, "In many treatises it is the fashion to speak of a magnetic fluid or fluids; it is, however, *absolutely certain that magnetism is not a fluid*, whatever else it may be. A magnet when rubbed upon a piece of steel magnetizes it *without giving up or losing any of its own magnetism*. A fluid can not possibly propagate itself indefinitely without loss."

The presence of magnetism, in extent or density, has come to be called a certain number of imaginary lines per square inch or square centimeter. We have seen that magnetism propagates itself across space and by induction causes a piece of iron or steel to also become magnetic. This may be explained by saying the magnetic lines, in number, concentrate themselves in such paths as present small resistance to their passage, so that in comparison to air, there is found to be a very large increase in the number of lines flowing when a piece of iron is interposed in the path of magnetic activity.

The lines flow out from the north pole and pass through the air to the south pole, thus completing the circuit. If the path is long and of such a nature as to present great resistance, the number of lines per square inch will be considerably smaller than if the path is short and of a permeable nature. Materials that present resistance to the passage of magnetic lines are said to possess reluctance; the reverse of this quality is called permeability. These qualities have received names that are somewhat similar to those relating to Ohm's law, the volt, ohm, ampere and watt. They are the "Gilbert," known as the unit of magnetomotive force, comparable to the volt or pressure; the "Weber," as the unit of magnetic flux, comparable to the ampere or quantity; the "Oersted,"

as the unit of magnetic reluctance, comparable to the ohm or resistance.

The names applied to these units have been selected by scientists in commemoration of celebrated physicists—the Gilbert in honor of the noted founder of magnetic research, Dr. William Gilbert, an Englishman (1540-1603), previously referred to; the Weber in honor of Wilhelm Edward Weber, a German (1804-1891), who made special experiments and researches in magnetism; and the Oersted, in honor of Hans Christian Oersted (1777-1851), a celebrated Danish physicist who discovered electromagnetism.

It should be noted that however often a bar magnet is severed, each separate piece is possessed of magnetic polarity. If a series of short bars be placed end to end, N to S, etc., the whole number will act as a single bar having concentrated force at the end and none at the center.

All of the phenomena inherent or peculiar to lodestones or bar magnets can be produced by a current of electricity; in fact, every wire that carries a current has a magnetic whorl surrounding the wire, rotating clockwise, if one assumes oneself to be looking at the end of the wire and the current is passing away from the observer. By making the current to traverse twice in the same vicinity, by placing two wires side by side, the magnetic whorl will enclose both wires and the density of the magnetism will be greater. Oersted discovered the relation between magnetism and electricity and demonstrated their interdependence, for with an electric current we can produce magnetism and with magnetism produce an electric current.

If a coil is made of annunciator or bell wire, about four inches diameter inside, and about forty or fifty turns of the wire are taken and the ends connected to an indicating device, such as a low-resistance galvanometer, the device will show the presence of a current of electricity when a horseshoe magnet is quickly moved so that the coil of wire will pass between the two poles of the magnet. The moving of the magnetic lines of the magnet across the wire causes the production of an electric current. When the horseshoe is moved downward, the current induced in the wire flows one way, and when the magnet is raised the momentary current moves in the reverse direction.

There must be movement of the lines; whether the magnet moves, or the coil of wire moves, or the strength of the magnetism be changed is immaterial, so long as there is a *change*. This principle is employed in the construction of dynamos for the generation of electric currents by means of engines, etc. When a wire is coiled around an iron core, much like thread is wound on a spool, the core will become a magnet when a

current of electricity traverses the wire, but will lose its magnetism when the flow of current is interrupted. This is called an electromagnet, because it is produced by electricity. The action is not instantaneous, however, because it takes an appreciable time for the magnetism to come to its full strength, and when the current is stopped the magnet will not instantly lose all its magnetism, but some moments will elapse. This peculiarity is called magnetic lag, because the magnetic effect lags behind the inducing cause. For ordinary coarse results, this does not have very much bearing, but when very delicate apparatus is dealt with, it becomes a serious matter and the quality of iron used for the cores of magnets requires careful selection. Door bells, telegraph instruments, motors, dynamos, etc., all come under these laws; in short, all devices using magnetism and electricity are included thereunder.

(To be continued.)

#### THE FALL OF JENKINS.

William Allen White, the Kansas editor, in telling of the troubles of a city editor in drilling green reporters, was reminded of an amusing case that came within his own observation.

"There is one thing you must remember above everything else," said the city editor of a St. Louis paper to a new reporter, "and that is: tell in the first few lines what your story is about—in other words, give the substance at once. Then follow with a recital of the facts, and conclude with interviews with the people concerned. That is the only orderly way of writing your story."

The new man gave close attention to this lesson, the result of which was that he handed in that night a news item reading as follows:

"Rufus Jenkins, a carpenter, slipped and fell in Vine street yesterday and sprained his ankle badly.

"Mr. Jenkins was walking along Vine street when suddenly his feet slipped from under him and he fell, spraining one of his ankles.

"When seen by a reporter, he said: 'I was walking along Vine street, when in some way my feet slipped from under me, and I fell heavily to the sidewalk, spraining one of my ankles.'

"Mr. Frank Fuller said: 'I was walking behind Mr. Jenkins on Vine street when I saw him slip and fall to the sidewalk. When I assisted him to rise he told me that he had sprained one of his ankles.'

"Dr. Thomas Rich, who attended Mr. Jenkins, said: 'Mr. Jenkins has a badly sprained ankle, due to a fall in Vine street. He will be laid up for some time.'

"Mr. Jenkins could not attend last night's meeting of the Carpenters' Union. The president, in convening the meeting, expressed regret that Mr. Jenkins could not attend, as he had slipped and fallen in Vine street, spraining one of his ankles."—*Harper's Weekly*.

#### A LUXURY AND A NECESSITY COMBINED.

Few necessities are luxuries and fewer luxuries are necessities, but THE INLAND PRINTER is the happy combination of a positive luxury and an absolute necessity.—*Joseph C. White, Brooklyn, New York*.



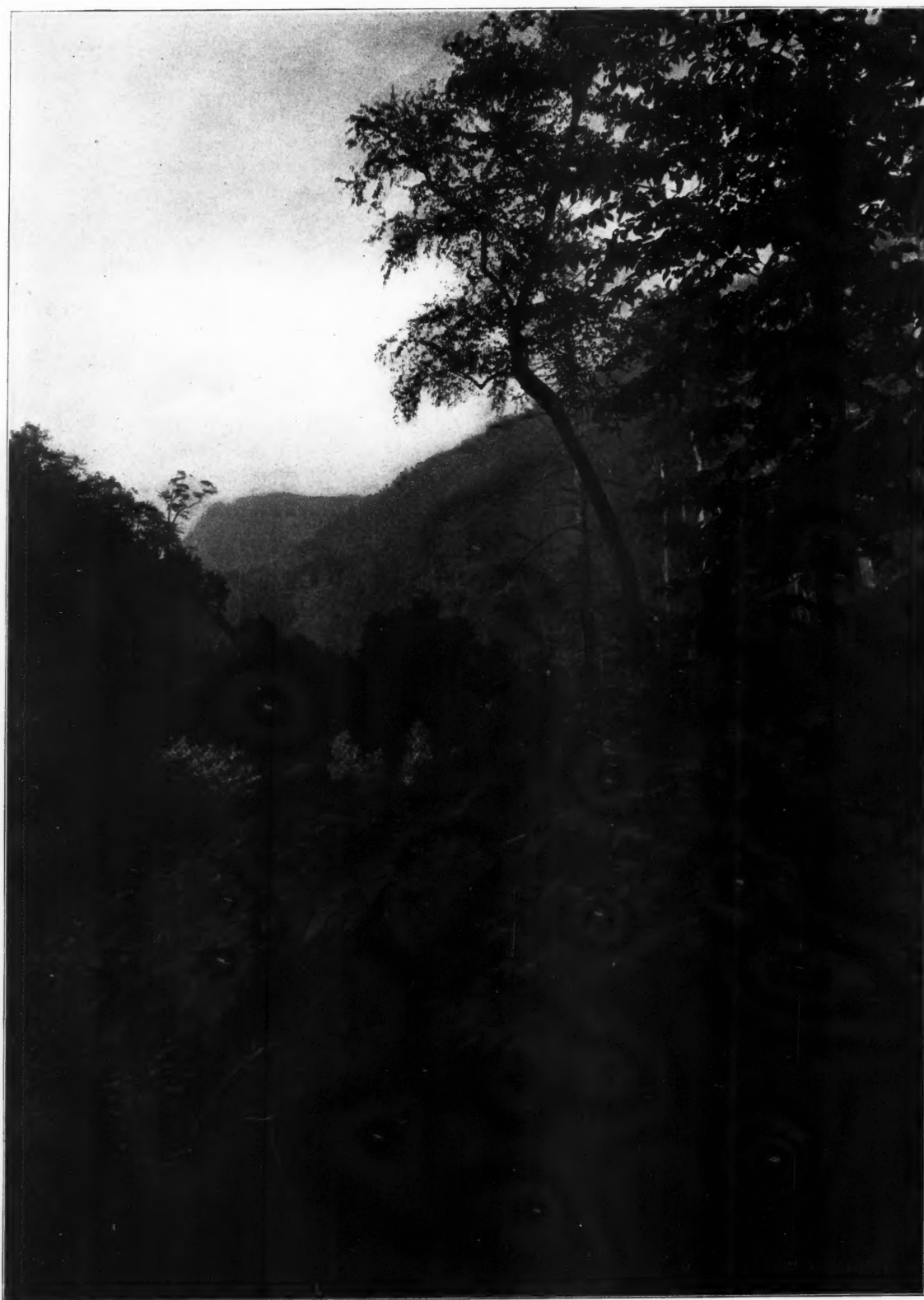


Plate by The Inland-Walton Engraving Company.

VIEW FROM TOPTON, N. C.

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In order to protect the interests of purchasers, advertisers of novelties, advertising devices, and all cash-with-order goods, are required to satisfy the management of this journal of their intention to honestly fulfill the offers in their advertisements, and to that end samples of the thing or things advertised must accompany the application for advertising space.

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Patrons will confer a favor by sending us the names of responsible news-dealers who do not keep it on sale.

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W. C. HORNE & SONS (Limited), 5 Torrens street, City Road, London, E. C., England.  
JOHN HADDON & Co., Bouverie House, Salisbury square, Fleet street, London, E. C., England.  
RAITHBY, LAWRENCE & Co. (Limited), Queen street, Leicester, England.  
RAITHBY, LAWRENCE & Co. (Limited), 1 Imperial buildings, Ludgate Circus, London, E. C., England.  
PENROSE & Co., 109 Farringdon Road, London, E. C., England.  
M. P. MCCOY, Phoenix place, Mount Pleasant, London, W. C., England.  
WIL. DAWSON & SONS, Cannon House, Breams buildings, London, E. C., England.  
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COWAN & Co., Wellington, New Zealand.  
F. T. WIMBLE & Co., 87 Clarence street, Sydney, N. S. W.  
G. HEDELER, Nürnbergerstrasse 18, Leipzig, Germany.  
H. CALMELS, 150 Boulevard du Montparnasse, Paris, France.  
JOHN DICKINSON & Co. (Limited), Capetown and Johannesburg, South Africa.  
A. OUDSHOORN, 179 rue de Paris, Charenton, France.  
JEAN VAN OVERSTRAETEN, 8 rue Joseph Stevens, Bruxelles, Belgium.

**EDITORIAL NOTES.**

THOSE printing-office employees who have accepted small favors from the purveyors of supplies must realize how small and mean a figure they cut when they ponder on how the "respectable" railroad officials worked a similar graft. Let the printorial end swear off—they can never be more than amateurs, and green novices at that.

THE circular writers of the Typographical Union and the United Typothetae probably marvel at their restraint and mildness of expression when they compare their controversial epithets with those that passed current at Washington. As Dr. Watts said, "Let dogs delight to bark and bite," etc., for our dish was quite strong enough to suit plebeian palates.

Now that the Paper Trust has abandoned the field, or promised to be good, à la juvenile court proceedings, will the price of its product tumble? And if it falls, will it stay down? It is well to remember that in the crusade against trusts it has not been proved that all such combinations are extortionate, and it is yet to be demonstrated that their elimination will result in a permanent lowering of prices.

THE demand for hygienic workrooms is not a passing fad; it is the development of a germ of business sense. The workers are helped to good health, and employers are the chief pecuniary beneficiaries of employees sound in body and clear of mind. Every one recognizes the unprofitableness of employing a sick man, but some apparently do not realize the loss that lurks in the prevalence of shop conditions which render an entire force "half-sick." The lazy bug is the legitimate offspring of bad air and filthy surroundings.

AMONG the many effects of the eight-hour strike will be a plethora of workers in the union jurisdiction. The so-called country printer had almost ceased to trouble his urban fellows, while high rents, machines, the effectiveness of union regulations and other considerations had about relegated the "boy" question. The labor market was nearing the conditions which pleased Mr. Journeyman when the strike occurred, and an army of new faces came to town—most of them to stay. Until this force is absorbed by the natural expansion of trade, the out-of-works—union or non-union—will have hard sledding, irrespective of what turn the fortunes of war may take. Latterly, there has been general inquiry as to why there was such a dearth of compositors, as compared with the number awaiting employment a

decade or so ago. Changed conditions and "good times" were among the chief reasons assigned, with emphasis on the prosperity note. During the same period, the craft had not been harrassed by many strikes or lockouts, and consequently there was not the infusion of new blood in the printing centers which had been customary, when there was always a "town on strike," or preparations being made for a strike. Steadiness of employment by the partial elimination of the downcast, shuffling work-seeker is one of the benefits that flow from industrial peace. Let those who hold that "striking pays" take this factor into consideration when they are doing the sum which brings them that comfortable answer.

THE feasibility of removing their offices to the country has been engaging the attention of London (England) printers. The "ruralites" speak glowingly of the benefits of well-lighted and roomy offices, of cheap labor housed in artistic cottages, surrounded by well-kept gardens, rather than in dank rooms on mean streets. But the consensus of opinion seems to be that expert workmen in the graphic arts are dyed-in-the-wool urbanites, who can not be weaned away from the delights of the city. And then, too, employers are afraid of getting too far away from base — the office of the man who gives out the work. This is one of the questions which each concern will have to settle for itself, as no general rule can be applied. An occasional firm may find it profitable to give its workshop a setting of green fields, but the printing trades will continue to flourish in the large cities. Where civilization finds its highest development and commercialism is making its best records, the printer is most needed, and there he'll be found, no matter how much he may pine for the sylvanescue.

THAT the printing trade in all its branches is one of the great industries of the country seems to be overlooked by Uncle Sam's baby department — that of Labor and Commerce. The current bulletin of the Labor Bureau devotes much space to the "Course of Wholesale Prices, 1890-1905," and though about two hundred and fifty commodities are mentioned, the raw material of the printer is not among them. There has been a great increment in prices of printers' supplies, and while the average man does not feel the burden as keenly as in the case of the product of other industries, yet the public pays the freight in one way or another. And it perhaps pays just as much for printing as it does for drugs and chemicals, or shingles, which are included in the compilation. Apart from any question of popular concern, the graphic arts are the bread-and-butter supply for a sufficient number of persons — capitalists and workers — to

justify the Government statistician keeping a sharp eye on affairs of interest to them. Every one knows in a general way that prices have soared, but we venture that what the bulletin calls a "graphic table," showing the fluctuation of prices in the past fifteen years, would astonish the majority of our readers, and incidentally furnish an explanation of some things.

#### REGULATING THE APPRENTICE.

AT ALMOST every considerable gathering of industrialists and in technical publications we are treated to oceans of talk about apprentices. Employers who are denounced by the unions as avaricious exploiters, responsible for the decadence of the apprenticeship system, reply that unionism has been and is the cruel step-parent which stands in the way of apprenticeship progress. Some aver that the material out of which journeymen are made is not up to old-time standards, while others are just as sure that changes within the shops are responsible for the unsatisfactory state of affairs. All are agreed that something should be done and with like unanimity nobody does anything. But it is impossible, with such general recognition of an evil and the necessity for a remedy, that we shall continue to mark time. Once a move is made in the right direction and an inkling is received of what can be done, we shall step forward with celerity toward an improved condition.

A few employers and a few union officials in an Eastern city have decided to break the ice and take a timid step in advance. There has been no formal presentation of the matter as yet, but in order to open up the question for debate, the union officials tentatively propose a working agreement on these lines:

(1) When a boy is accepted as an apprentice, the union shall be notified for the purpose of making a record of the case.

(2) No apprentice shall be employed without the written consent of his previous employer and the president of the union.

(3) There shall be a board of examiners consisting of two journeymen from the office in which the apprentice is employed, two employers and an officer of the union.

(4) The board at the conclusion of each year shall examine an apprentice as to the progress made in learning the art, and if satisfactory, the employer shall grant the agreed increase in wages.

(5) If for any reason an apprentice fails to meet the requirements of the examining board, he may be "set back" for three months and then be reexamined.

(6) If the employer is remiss in his duty toward the apprentice, and by reason thereof the

latter is unable to pass an examination, the board may order that the apprentice be given the usual increase of wages.

(7) The examination at the expiration of the fourth year shall determine the youth's fitness to be classed as a journeyman, though the employer will be under no obligation to retain him.

In the rough draft before us it is provided that the examiners shall serve without compensation, and the union specifically disavows any desire or intention to meddle with the wages of apprentices—that matter to be determined by the custom of the office or agreement between the employer and the apprentice. It also provided that every boy shall be informed as to the proposed agreement, so that he may know "what is expected of him."

From the standpoint of the boy, much will depend upon the personnel of the examining board and the character of the examination, and an instant criticism may be that the plan is deficient—that there is no intimation as to what will be demanded of the apprentice in the way of workmanship. Others, again, will contend that the board should have greater permanency and such width of jurisdiction that all apprentices could be examined by it, hearing witnesses from the office as to the boy's fitness. The desirableness of all that, and more, may be conceded, and yet the promoters of this plan are wise in not undertaking too much. They are venturing in an unexplored country, as it were, and it is best to allow experience to dictate the route to be followed, rather than to attempt to map out a line of march at the outset. Participation in the work will afford a better idea of what an examination should consist of, than the most brilliant flashes of speculation. Though the proposition before us is modest enough, yet it deals with a rather large problem, and the plan must develop and grow, for it can not be made to order, even for one community. So the safest and best thing is to allow the details to settle themselves, for which the flexibility of the plan is admirably adapted.

Among the decided merits we see at a glance is that the apprentice is elevated to a position of dignity and concern, and the plan imposes on him duties and obligations which will bear fruit in the making of the man. He can no longer hop from office to office, but there is a court to which he can appeal—and to which it is to his interest to appeal—if he is not "getting a fair show." There are no penalties provided, which is well. Much of the neglect of apprentices is due to ignorance and forgetfulness, and if in the opinion of the board a boy has been overlooked, there are few employers who would not willingly remedy the wrong once they were convinced of its existence. After all, perhaps we are very much in the dark

as to the needs of apprentices, and with such boards in existence there would be an illumination of some dark places as a result of persistent systematic study of the question.

The mass of knowledge that would accumulate would soon have its effect on craft legislation, which would be colored by some regard for the interests of the apprentice and not wholly born of a desire to limit the number of boys or make their exploitation easier and more profitable, as the case may be.

The purpose of the plan is so estimable in intention—is so absolutely a move in the right direction—and is so simple and feasible in its method of operation that we wish its promoters godspeed. If it is adopted by any large city, its operation will be watched with interest.

W. B. P.

#### A REMARKABLE METAL.

**D**R. WERNER VON BOLTON at the time his tantalum lamp was shown in Berlin, in an introductory address before the Electro-Technical Association, spoke of the steps he was obliged to pursue to produce the metal tantalite which forms the filaments of the new lamps.

This metal, very curiously, has extraordinary hardness, so much so that a diamond drill working continuously for three days and nights at five thousand revolutions per minute made a barely perceptible effect on the sheet of tantalite which was subjected to the test. The metal resists chemicals and also possesses great elasticity. It has been suggested that pens could be made from the new metal instead of from the now used steel or gold.

It will be a day of rejoicing when the knives of paper-cutters, trimmers, etc., need not be periodically reground, as at present; when all sorts of edged tools will be made of a material so inherently hard as to prolong their life.

The tools used on engraving machines of all kinds, in wood engraving, banknote or lithographic work, will be lasting, and in many cases greater delicacy can be secured because of the preservation of the very sharp point that is required in mechanical engraving. This can be better appreciated when it is known that in many engravings the shallowest grooves are not more than 12 to 13 ten-thousandths of an inch deep. If now an engraving tool wears off this minute amount, the details in the shadows will be lost. This amount is about one-half of the proverbial "thickness of a hair" that many are wont to use when they desire to convey the idea of great delicacy or precision.

The absence of continual resharpening of gravers of all kinds will be an important item. Engraving tools for use on automatic engraving



machines have been made out of diamond and sapphire, but though they serve their purpose well, yet they are too expensive and liable to accidental fracture.

Tantalite, on the other hand, while exceedingly hard, has a high modulus of elasticity, so that a fine-pointed engraving tool would, with ordinary care, be practically indestructible.

Wood engravers, lithographers, steel engravers, etc., will welcome a metal that promises so much and which comes with such good credentials. The firm of Siemens & Halske bears a world-wide reputation and the trade in general is to be congratulated that the practical introduction of so important an article is freed from the usual spectacular phases of even quasi-boom promotions.

#### WHY BOYS WON'T LEARN TRADES.

OUR esteemed contemporary, *Newspaperdom*, deplores the lack of printers and wants to know why more boys do not learn the trade. In another issue, our friend advises the editors of great papers to get down among the people—in the currents of life—if they would know what to write about. If this admonition had been heeded, and the editor of *Newspaperdom* mingled with working-class people, he would have discovered that they know and feel the mechanic or artisan has lost caste in the community. The boy with ambitions is not going to learn a trade when he sees an ex-saloon-keeping ward boss or shyster lawyer spoken of as “elevating” himself from the low estate of a printer’s case. Franklin and Greeley were proud to be printers; now their inferiors who occupy a small space in the public eye are proud they have ceased to be printers, and can hardly conceal the sneer that is within them for those who remain such. If a boy has push and ambition, why should he put in years in a printing-office? The successful printers, the ornaments of the craft—statesmen, professional men and employers—tell him plainly the way to success as they spell it lies not inside a printing-office, but outside of it.

It is presumed *Newspaperdom* had in mind youths who were not ambitious, but anxious to seek a means of livelihood, and make of themselves useful citizens—boys with a higher idea of success than the popular conception, who want to be manly men all through the chapter. In truth, it is to this class a trade must look for its real exponents, for in these days the “climbers” have too many irons in the fire and “elevate” themselves too quickly to lend much luster to their calling as artisans or mechanics. But even to such modest and well-balanced youths a “trade” does not make the appeal it once did. Under the factory system,

the average journeyman is no longer a coworker with and assistant to his employer—he is a mere productive unit, whose baptismal name is never known and whose identity is almost submerged in a number by which he records his goings and comings. These and similar methods are necessary for the maintenance of discipline in great establishments, and mention is made of them not to disparage, but because they in part answer *Newspaperdom*’s query, such conditions not being in consonance with the spirit that pervades the twentieth century youth. He might be quite willing to resort to them, but he girds mightily at submission and has small opinion of those who bow their necks to the yoke.

Then there is the possibility of a trade being a lifetime asset. That is not the powerful magnet it once was. Machinery or a substitute—as photoengraving superseded wood engraving—may possibly leave the mechanic stranded in middle life. Another very practical problem is the possibility of an invasion of female labor with its accompanying low wages. The higher development of woman, machinery and specialization all conspire to make this a menace to the youth. In the compositors’ branch, we have heard much talk of the fitness of women as operators—and some of it from *Newspaperdom*, if memory does not play a trick. If it be true that women, as has been stated, make competent operators in six months or a year, what folly to ask why boys will not become printers? Such a statement is a warning to youths to beware a woman’s trade unless they be content to work for a slight advance on female wages. If this talk of women printers frightens the journeyman of to-day, we may be sure it will have a marked effect on those considering taking up the art preservative as a life work.

But youths would take all the chances of being displaced by improved methods or the competition of female labor—for that they may be called on to meet in any walk of life. It is the low esteem in which the mechanic is held which causes many to balk essaying a trade. It is freely admitted that this is the chief reason why American-born white women will not become servants, and we are told that if it were not for foreigners, there would be none to do certain kinds of laboring work. If to hold household servants and navvies in contempt makes Americans, well-fitted to do such work, suffer hardships rather than “lower” themselves, who can measure the influence of a similar attitude toward mechanics and artisans on youths qualified to acquit themselves as craftsmen? Speaking broadly, when there is a real call for men they will be forthcoming, but the most desirable youths will be encouraged to master a





Plate by The Inland-Walton Engraving Company.

CISTERNs OF THE NANTAHALA.

Copyright, 1905, by N. Brock.

trade when it is understood that success is in doing what you have to do as well as you can, and that a producer is accorded as much respect as the non-producer, who soileth not his hands nor taketh off his coat. For ourselves, we think there is a future for the printing industry, and the surety of a fairly good livelihood for all who have an aptitude for the art and who follow it sincerely and diligently. But the constant depreciation of the social worth of the mechanic and the never-ending threatenings to lower his standard of living—vain though they may be—frighten away from the arts and crafts thousands of young men specially equipped to adorn them. Recently so eminent a man as ex-Judge Taft, the Secretary of War, protested against the tendency to sneer at \$1,400-a-year Government clerks as failures, because it was not only at war with the facts but inimical to the maintenance of an efficient civil service. If Mr. Taft had reason for his solemn protest, and he has been generally commended for his utterance, how much more baneful to society must be the effect of the almost universal disparagement of the mechanic? At least those who are forever scheming to lower the standard of living of mechanics should have either the wit or the decency not to ask why boys won't learn trades.

W. B. P.

#### A NEW ELECTRIC LAMP.

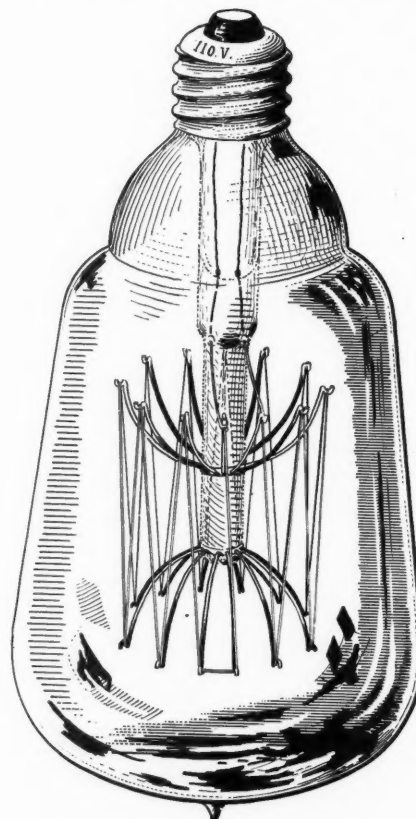
**T**HE printer requires the best illumination attainable. This is especially true in the pressroom when three-color jobs are being run, so that the right amount of color and the very close registration which are required may be secured with the greatest ease and exactness.

Anything that will produce better and more economical results in the distribution of illumination is to the interest of the trade in general and the craftsman in particular. Siemens & Halske recently exhibited before the Electro-Technical Association of Berlin their new tantalite lamp, which in form is not very dissimilar to the ordinary incandescent lamp, though much more efficient in operation, both as to life and economy in the use of current.

This lamp is rapidly coming to the front and will ere long be a successful competitor of the carbon type which is now so universally known. The metal tantalite is used for the filament instead of carbon. This metal is now readily obtainable in sufficient quantities to assure the manufacture of the new form of lamp at a relatively low cost. Unlike the Nernst lamp or the Cooper-Hewitt vacuum tube lamp, the "Tantalum" lamp, as it has been christened, starts into action as soon as the ordinary switch is turned on, without any waiting whatever.

The filament is very strong and possesses a high degree of elasticity, even though very hard. Should the filament break for any reason, the lamp does not become useless, for as soon as the two broken ends are brought into touch and current is on, they will be welded together again, making practically a new lamp.

From the illustration it will be seen that the filament is very much longer than the carbon form; this is due to the metal tantalite having less resistance than carbon. The wire is stretched over an insulated frame. The metal does not possess any of the characteristic brittleness of carbon, for it is bent over its supports while cold.



THE TANTALUM LAMP.

There is considerable contraction in the length of the filament, the older it becomes, that is to say, the more it is used. The lamp is less liable to breakage in transport because the filament is placed on the insulating support rather loosely, when new, to allow for the lengthwise contraction spoken of.

Because of its being so very strong mechanically, the lamp can be used equally well in any position. The illumination is of a whiter cast than that from a carbon lamp.

The increase of efficiency, no doubt, lies in the great structural tenacity of the filament, which

permits a very large increase in incandescence, hence a whiter light and less watts per candle-power. An ordinary 16-candle-power lamp will require about 55 to 60 watts, and a high efficiency carbon lamp may drop to 50 watts, with a shorter life. In the former case, the watts per candle-power become 3.44 or 3.75 and in the latter 3.12.

The resistances, volts, watts, amperes, etc., are given in the table:

TYPE OF LAMP.	Nominal Candle- power.	Volts or E. M. F.	Ohms or R.	Amperes or C.	Watts or P.	Watts per Candle.	Average life. Hours.
Ordinary incandescent .....	16	110	202	.545	60	3.75	1,500
Ordinary incandescent .....	16	110	220	.500	55	3.44	1,000
High efficiency .....	16	110	242	.455	50	3.12	800
Tantalum .....	16	110	473	.233	25.6	1.6	1,000

From this table it is seen that the new lamp requires practically one-half the watts of the best carbon lamp, so that even at an increase of cost per lamp, the tantalum type will work out more economically to the consumer, without considering the higher efficiency of labor under good conditions of illumination.

The lamp should not produce so much heat as the present lamp; working at a higher efficiency, the slower, heat-producing reddish rays are absent and with them must disappear considerable heat.

N. S. A.

#### THE UNIVERSALITY OF THE GRAPHIC ARTS.

VERY few persons, ordinarily, consider the scope of the printing craft and its allied collaborator, the engraver. If one but stops to take account of the activities of modern life, he will be astounded to note that the mantle of Franklin has overshadowed all the various ramifications of business and social intercourse.

The craftsmen who are the exponents of the graphic arts cult make their energies and their resourcefulness permeate every nook and corner of the world. The causalist will say this is overdrawn. Suppose for the period of one month or even one week the inception of Gutenberg or Durer, the inspiration of Daguerre and his apostles, were at once removed from their accustomed niches, and all the products of their genius that the past has accumulated destroyed—the printed page obliterated and its replacement made impossible. Would not this be chaos indeed?

The way one comes the more to appreciate an advantage is to be suddenly deprived of it. We become so cynically matter-of-fact that our finer sensibilities are dulled and our ability to differentiate between the form of a thing and its substance is so warped that we are wont to hitch the horse behind the cart and delude ourselves with all sorts of sophistry; ever following superficiality and

avoiding a too close association with anything approaching an analytical temperament.

All this is why we take, as a matter of fact, the existence of so glorious a craft and relegate its apostles to the region of the Styx as compatriots of the ubiquitous printer's "devil," who in popular fancy is ensconced in some weird or mysterious manner as "master of ceremonies," whose appanages we make into a fetish of unconcern and wend our several ways, swathed in the bands of self-complacency and self-sufficiency, to the dirge of thousands of unrecognized abilities and aspirations that have and are continuing to make the graphic arts craft an immortalization of the most noble idealism of the human mind. N. S. A.

#### THE PICTORIAL AGE.

THE present may well be designated "the pictorial age." It is a large leap from Egyptian hieroglyphics to latter-day perfecting presses, but as good as the average present-day illustrations are, some of them would require a second Rosetta stone to disclose the key that would lead to their deciphering. Be this as it may, we are in the throes of illustration. The *Paradise of the Pacific*, published at Honolulu, Hawaii, speaking of "The Picture Age," says: "The descriptive wording is but the echo of the expression in the picture. Among printers and publishers as well as their patrons this may rightfully be termed the Picture Age, for never before have such excellent results in the way of pictorial illustration been achieved in the art of printing; nor indeed has there been seen such a profusion of pictorial embellishments on the pages of books, magazines, newspapers, pamphlets and advertising circulars as at present. Pictures greet the eye of the reader in almost every publication. Lithographs as beautiful as the fine expensive chromos of thirty years ago are now seen adorning the pages of twenty-five-cent magazines. The half-tone that the printer began using only fifteen years ago is as common as type and when manipulated by the thorough craftsman on his printing machine is rendered even more truthful than the photograph itself. Three-color work under the skill of correct registering and the nice adaptation of colors makes nature almost live in the page. The great advertisers of the world, who make princely appropriations each year to spread their trade announcements, avail themselves of the best art productions to make their commercial literature attractive to the eye, their theory being that the picture should tell as much of the merit of their wares as possible. Authors of the new books are getting very particular about the class of illustrations their publishers employ. With the weekly illustrated papers the race for half-tone supremacy



is very keen, as the publishers of these periodicals are well aware that their very life depends on their pictorial, not their editorial, department. This was even true when wood engraving was used. The monthly magazine publishers eagerly grasp every new device that tends to enhance the vividness of the scenes that go with their stories. They know that an article of history, fiction or present-day real life unaccompanied by pictorial features fails to reach the reading public as it should.

"The *Daily Graphic*, of New York, was the wonder of the age a generation and a half ago. Events happening in the morning were crudely portrayed in the afternoon by photographic process and patrons of the paper marveled that the publishers could sell their paper for five cents a

ous day, or, in the case of the evening paper, the same day. Portraits of people connected with such events are also required. Costly art plants with special employees must be installed by every daily that wants to gratify the public and keep along with the procession.

"The readers of most illustrated periodicals give their attention to the pictures before they glance at the text. Articles devoid of faces or other views are often passed by till some later time of leisure permits of their perusal, but the cable or telegraph dispatch, the murder, robbery, fire, accident, or even the joke animated by a picture is read to the finish at once. The advertisement embellished by any sort of a new cut is sure to attract notice.

"The expert cartoonist or the artist who can render speaking half-tones in daily print is greater than he who thunders in the editorial columns—that is, in the eyes of the business manager and possibly a large percentage of the public. Artists are worth as much as writers in the magazines, for this is the Picture Age and pictures are what popularize most periodicals."

To modify the assertion of crudeness charged against the New York *Daily Graphic* we reproduce a first page of that publication, of February 14, 1888, which, because it was the pioneer illustrated daily journal of the world, is of historic interest. One must take exception when the results of eighteen years ago are called crude, and the specimen page shown is its own defense.

#### UNDERPAID FOREIGN POSTAGE.

THE public prints have recently sounded a warning to American correspondents to exercise more care in affixing the proper amount of postage to mail matter intended for points abroad. American residents, especially in Germany, and business houses, as well, have found it necessary to make formal complaint to the American consuls anent the great influx of underpaid mail matter. German postoffice officials take a special delight in weighing up American mail so as to add a considerable amount to the postoffice revenues and impose a hardship on the unlucky recipient of the offending mail. The officials, of course, are within their prerogatives and can not be blamed for living up to the requirements of the International Postal Union.

Americans who hurriedly and carelessly send away foreign mail, letters with 2-cent stamps that should have 5 cents affixed, or an overweight letter, with only a 5-cent stamp, that should have 10 cents attached, subject their friends and their business correspondents to needless annoyance, and if they but realized that the persons receiving such



FRONT PAGE OF THE FIRST ILLUSTRATED DAILY NEWSPAPER IN THE WORLD.

copy. The venture was a failure financially, but it proved to be the germ of the perfect half-tone fifteen years after. To-day the dailies in all large cities have half-tone plants that bring out life-like scenes on ordinary paper in an incredibly short space of time. There is practically no change in the price of daily papers since the period prior to the advent of the half-tone, yet the public demand the views of the important events happening the previ-



mail not only had to pay the deficient postage, but a *fine* in addition, equal to *double* the amount of the shortage, it is thought they would use the necessary care in dispatching their letters. It is not alone Germany that is able to considerably increase postal revenues, but other countries also levy tribute as a penalty for the same kinds of carelessness.

To one who has lived on both sides of the water, the condition is not wholly to the disad-

address, of the sender on the envelope, would enable the officials to forward a notification card informing the sender of the deficient postage. One or two experiences would effectually cure the careless one.

#### THE INLAND PRINTER HELPED HIM.

Last year I was working in a shop which had a Linotype, and by the sudden resignation of the operator, the proprietor was left with no one to run the machine. I took hold of it with no previous knowledge of the same and



Plate by The Inland-Walton Engraving Company.

THE FISH THAT DID NOT GET AWAY.

White's Lake, Algonquin National Park of Ontario.

Grand Trunk Railway System.

vantage of the "Yankees," but our foreign cousins also err sometimes in the same way, but after one has repeatedly received underpaid mail while abroad from American friends, one wonders where the joke comes in.

If the postoffice officials of the sending country refused to forward underpaid mail, the troubles mentioned would soon disappear; besides, a considerable increase of revenue would be secured, which is now lost to the receiving country, which *doubles up* the amount.

The stamping of all such mail with "held for postage," in connection with a ruling that makes obligatory the placing of the name, or at least the

ran it steadily for six months with a total expense for repairs of 10 cents, one of the spring pawls in the entrance to the first elevator wearing out and having to be replaced. The only help or instructor I had was the back numbers of **THE INLAND PRINTER** and the new ones I received each month.—*LeRoy Boggs, Mitchell, South Dakota.*

#### MADE A HIT WITH HIM.

I am in receipt of the sample copy of **THE INLAND PRINTER**, which you sent me and am greatly pleased with it. I think possibly that, being a last year's copy you do not intend to charge for it, but I consider it as being worth far more than the price named on the cover (30 cents) therefore I enclose exchange order for that amount, also \$1.50 for six months' subscription.—*N. G. Abbott, Lodi, Wisconsin.*

Written for THE INLAND PRINTER.

**PHYSICAL CHARACTERISTICS OF RELIEF ENGRAVINGS, ESPECIALLY RELATING TO HALF-TONES.**

NO. V.—BY N. S. AMSTUTZ.\*



At the risk of reiteration, it should be stated that it is important for every engraver, printer and user of half-tones to understand the fineness of the various steps, as well as the results of the art; this will tend to raise the standard among process-workers and bring the craft to the point of technical efficiency that has been the ideal of its most ardent followers. The process, while dealing with minuteness on every hand, yet possesses some inherent shortcomings which the workers and operators are constantly striving to overcome.

Between brushing, rolling-up, powdering, staging, fine etching, etc., and the retouching of negatives, which has recently come into vogue in

measure the parts of the mechanism under construction; yet the process photographer, the etcher and the printer are expected to do uniform work under all sorts of conditions without the use of any means of measurement at all adequate to the precision of the work in hand.

Certain workers will have their own ideas as to the necessary size of dots on the negative or the plate being etched, for different tone values, which ideas will be different from those of other workers; yet both sets of operators will have the same aim of proficiency before them. How can any one *control*, within definite ranges, whatever he is producing, without noting or recognizing the interrelated dimensional values of the different sections of his work? The art of half-toning is not old yet and in consequence has not become loaded with traditions, and by reason of this immunity, is free to adopt the most advanced results of research in this interesting field.

TABLE I.—Showing the characteristics of Fig. 25, at 110 lines, special banded test etchings from "O" time to 40 minutes in the acid under flat etches.

KINDS OF DATA.	ETCHING TIME OF BANDS.					
	1½ min. O dots.	2½ min. O dots.	5 min. O dots.	10 min. O dots.	20 min. O dots.	40 min. O dots.
Diameters.....	.0031"	.0032"	.0038"	.0047"	.0060"	.0079"
Areas.....	75.48	80.43	113.41	173.49	282.74	490.17
Per cent white.....	9.1	9.7	13.7	20.9	34.1	59.4
Per cent black.....	90.9	90.3	86.3	79.1	65.9	40.6
Measured depths.....	.00084"	.0012"	.0015"	.0020"	.0026"	.0032"

Unit area = 828. Pitch = .0091". Diagonal pitch = .01287". "Enamel" dot diameter = .00277".

Europe, the personal equation entering into the production of half-tones is a large one indeed. This of itself is no handicap, for it is obvious that inanimate materials can not of themselves arrange their interrelations and coördinate causes and effects, so "the man behind the gun" perforce is the greatest source of activity. Since the personal element is so essential, is it not the part of wisdom and the exercise of the highest business acumen for the proprietor to place in the hands of the photographer and etcher, and the printer as well, such means as shall enable them to quickly determine the best course to pursue under the exigencies of any specific problem?

It has been shown in the course of these articles that the minutiae of the production and printing of half-tones is such as to place the profession on the same plane with the skilled worker in precision engineering; this being so, it is important to consider what the results would be of a mechanic's efforts in the construction of a delicate device, without having recourse to some means (at least as delicate as the work in hand) by which to

One operator will examine his work and tell you that the white dots of a certain tone are about one-fourth or one-third or one-half of the screen mesh. Another, who can not look at the work with the same eyes, may in all candor say the tone values mentioned to his eyes appear to be one-third, one-half, or three-quarters of the screen pitch. This is all due to there being no standard basis of comparison or measurement in vogue. If the person who makes the negative also made the etching there would not be such an urgent demand for some *uniform* system of comparison, but as these two phases of the work are, beneficially, in separate hands, it is of the utmost importance that the operators and etchers be supplied with some moderate-priced microscope which has a staging that can be placed over any part of the work that is under examination and which has a screen in its focal plane that will enable direct measurement of diameters or widths of dots, etc., to be made, and such dimension identified in terms of a known unit, as a thousandth of an inch or hundredth of a millimeter. By using such an instrument the operator and etcher, in collaboration with each other, knowing that an "enamel" dot

\* Member of the Royal Photographic Society and Society of Arts, London; and Associate Member American Institute of Electrical Engineers.

of a certain *definite* diameter is the one best to use, can make the negative accordingly so as to enable the etcher to hold a given finished size of dot which will have the best tonal interpretation, also making allowance for the remaining interventions between the engraving and the printed page.

A feature of the usual half-tone inspection that is not generally understood is the misinformation which is acquired through the use of a low-power magnifying glass. Unless a magnification of at least twenty diameters is used, the form of the

gations is to place within the hands of graphic arts craftsmen data that shall enable them to get greater certainty and uniformity in their work, that will not tear down precedent or experience, but shall fortify the same. It is important, at this point, to controvert a semi-popular impression that the "average man" does not care for information of a technical order which bears on his profession. The purpose of self-improvement is present and the aspiration to be second to none holds good even in these days of great strenuousness, so that the oft-

TABLE M.—Showing the characteristics of Fig. 26, at 110 lines, special banded test etchings from 40 minutes to 40 + 25 minutes in the acid under flat etches.

KINDS OF DATA.	ETCHING TIME OF BANDS.								
	40 min. O dots.	40 + $\frac{1}{10}$ min. O dots.	40 + $\frac{1}{5}$ min. O dots.	40 + $\frac{1}{4}$ min. O dots.	40 + $\frac{1}{2}$ min. O dots.	40 + 5 min. O dots.	40 + 10 min. Crescent dots.	40 + 20 min. Square dots.	40 + 25 min. • dots.
Diameters.....	.0079"	.0080"	.0082"	.0084"	.0087"	.0092"	.0035" <sup>a</sup>	.0015"	.0013"
Areas.....	490.17	502.67	528.10	554.18	594.47	664.76	122.5	22.5	13.27
Per cent white.....	59.4	60.8	63.9	67.0	71.9	80.3	85.2	97.3	98.4
Per cent black.....	40.6	39.2	36.1	33.0	28.1	19.7	14.8	2.7	1.6
Measured depth.....	.0032"	.0033"	.0035"	.0040"	.0044"	.0045"	.0046"	.0047"	.0048"

\* = black dots of "whites." a = equivalent square dot.

Unit area = 828. Pitch = .091". Diagonal pitch = .01287" "Enamel" dot diameter = .00277".

dots, especially the round ones, will not be truly apparent, as round dots in the grays will seem to be square. This is quite misleading and places the etcher at a disadvantage. Such a microscope can be used under an incandescent lamp, bright daylight or any suitable source of illumination, and the eyepiece brought into focus by the right hand, while the staging is held by the left hand

heard cry, "they will not hear," is more of a reflection of the state of mind of the one who queries than of the usually receptive mind of the busy worker.

Again, it is said the matter is too deep and reaches beyond the comprehension of the reader. It must be confessed that the novice would have some difficulty in following the various phases of

TABLE N.—Showing the calculated changes in areas of printing dots from the "three-quarter" white region to pure white at 100 lines per inch.

No.	White dot diameters.	Crescent dot areas.	Per cent of white.	DIMENSIONS.		Round dot diameters equivalent to crescent dot areas.	REMARKS.
				Point to point.	Hollow to hollow.		
1	.00977"	none	75.00	none	.00436"	none	True $\frac{1}{4}$ white.
2	.01000"	214.60	78.54	.01000"	.00414"	.0057"	"Three-quarter" white.
2 a	.0102 "	189.14	81.09	.00800"	.00394"	.0049"	
3	.0105 "	155.65	84.43	.00680"	.00364"	.0045"	
4	.0110 "	111.43	88.86	.00542"	.00314"	.0038"	
5	.0115 "	76.44	92.36	.00432"	.00264"	.0031"	
6	.0120 "	49.33	95.07	.00340"	.00214"	.0025"	
7	.0125 "	28.75	97.13	.00252"	.00164"	.0019"	
8	.0130 "	13.18	98.68	.00170"	.00114"	.0013"	
9	.0135 "	2.38	99.76	.00092"	.00064"	.0006"	
10	.0140 "	.34	99.96	.00020"	.00014"	.00006"	
11	.01414"	none	100.00	none	none	none	"Covering" dot.

Unit area = 1000. Pitch = .010". Diag. pitch = .01414".

NOTE.—The dimensions of the crescent dots given predicate, as they reduce in size, the formation of square followed by rectangular dots.

directly over such part of the subject as requires examination; whether of the negative, enamel print, etching, completed engraving, engraver's proof and press proofs, before or after making ready. These can all be analyzed and definite comparisons made.

Concisely stated, the purpose of these investi-

the treatment, but the implied statement that one is "ahead of the procession" is fallacious. To particularize, there can be no procession at all unless there is a leader, and what more commendable trait in trade journalism than that which causes an organ to actually lead in all of the various ramifications of its chosen field?



## REGION OF "THREE-QUARTER" WHITE.

Of all the difficult portions of the entire gamut of tonal interpretation, that located in the region of "three-quarter" white is the one which causes more concern to the process photographer and etcher than any other. The three-color worker has this evasive region to deal with to a larger

Two banded test etchings at one hundred and ten lines per inch have been made to develop this region. Fig. 25 shows tones leading from the smallest  $\circ$  dots at a one one-fourth-minute etch, to the smallest  $\bullet$  dots under a forty-minute etch, each stage being double the time of a previous one. Fig. 26 shows the tone ranges over the "three-

TABLE O.—Showing the required dot dimensions to produce true tonal gradations from black to "white" at 100 lines per inch.

White ( $\circ$ ) dots from black to " $\frac{3}{4}$ " white.

DATA.	Black.	$\frac{1}{8}$ white.	$\frac{1}{4}$ white.	$\frac{3}{8}$ white.	$\frac{1}{2}$ white.	True $\frac{3}{4}$ white.	Nominal $\frac{3}{4}$ white.
Diameters.....	none	.0028"	.0040"	.00565"	.0080"	.00977"	.0100"
Areas.....	none	62.5	125.	250.	500.	750.	785.4
Per cent white.....	none	6.25	12.5	25.	50.	75.	78.5
Per cent black.....	100	93.75	87.5	75.	50.	25.	21.5

Black ( $\bullet$ ) dots from " $\frac{3}{4}$ " white to "white."

DATA.	Nominal $\frac{3}{4}$ white.	$\frac{1}{8}$ white.	$\frac{1}{4}$ white.	$\frac{3}{8}$ white.	Pure white.
Diameters*.....	.00565"	.00488"	.0040"	.0028"	none
Areas.....	214.6	187.5	125.	62.5	none
Per cent white.....	78.5	81.25	87.5	93.75	100
Per cent black.....	21.5	18.75	12.5	6.25	none

\* = equivalent of crescent dot areas.

Unit area = 1000. Pitch = .010". Diagonal pitch = .01414".

extent than monochrome requirements ever impose on a wide-awake processman.

This evasiveness causes many heartaches and grievous misunderstandings, and for these reasons it should be understood by the manager, the user, and admirer of half-tone reproduction that the

quarter" whites under short bites, starting from a forty-minute  $\circ$  dot to the smallest  $\bullet$  dot at twenty-five minutes in the acid. The detail etches are noted at the top of the engraving in each case. Fig. 26 and Table M disclose the critical region commencing at about the five-minute etch. The

TABLE P.—Showing effect of spreading action on tonal values of white ( $\circ$ ) dots at 100 lines per inch and a unit area of 1000, without overlays.

ENGRAVING.		PRINTED PAGE.		
Dot diameter.	Per cent white.	Decreased dot diameter.	Per cent white.	Per cent loss of white.
.001"	78.54	lost by filling.	black.	78
.002"	3.1416	.001"	.7854	2.36
.003"	7.068	.002"	3.1416	3.93
.004"	12.56	.003"	7.068	5.49
.005"	19.63	.004"	12.56	7.07
.006"	28.27	.005"	19.63	8.64
.007"	38.48	.006"	28.27	10.21
.008"	50.26	.007"	38.48	11.78
.009"	63.61	.008"	50.26	13.35
.010"	78.54	.009"	63.61	14.93

The decrease of diameter is taken as .001" for each change in diameter of the engraving dots.

process has its limitations; that from the very nature of things, perfection can not be attained. By contrast, in photogravure practice, one has varying sized dots and varying thicknesses of ink, both dependent in varying degrees on the variable light action existent in the process of photography, while in half-tone work *only the size of dot* is the variable factor, which, it is submitted, has quite a load to carry.

TABLE Q.—Showing effect of spreading action on tonal values of black ( $\bullet$ ) dots at 100 lines per inch and a unit area of 1000, without overlays.

ENGRAVING.		PRINTED PAGE.		
Dot diameter.	Per cent white.	Increased dot diameter.	Per cent white.	Per cent loss of white.
.001"	99.21	.002"	96.86	2.35
.002"	96.86	.003"	92.93	3.93
.003"	92.93	.004"	87.44	5.49
.004"	87.44	.005"	80.37	7.07
.005"	80.37	.006"	71.73	8.64

The increase of diameter is taken as .001" for each change in diameter of the engraving dots.

The dot diameters may be assumed as equivalents of equal area square or other shaped dots.

total time in the acid for each band is the value of each column added to the value of the starting band. In Fig. 25 the start is "0" and in Fig. 26 it is forty minutes.

Table N gives the calculated values of the "three-quarter" white region, equivalents of "crescent" dots from the point of second acceleration to pure white at one hundred lines per inch. The equivalent diameters given in this table refer



to the same areas of crescent dots that possess a similar tone value. Table N also shows the rate at which the tone values change from "three-quarter" white toward pure white. This feature is also localized by the short periods of time in the etching bath of Fig. 26 immediately following the "three-quarter" white region.

In addition to giving the characteristics of Figs. 25 and 26, in Tables L and M the micro-

ing, the percentage values of the modifications and their original tone relation.

It will of course be obvious that a spreading action of .001 inch bears a greater relation to a small  $\circ$  dot in its proportion to unit area, and its consequent reduction in size, than the same amount added to the diameter of a small  $\bullet$  dot and the proportion it bears to unit area. For illustration, suppose a  $\circ$  dot of .0026 inch diam-



FIG. 25.

Banded flat etches at 110 lines per inch. Data given in Table L, enlargements in Fig. 27.



FIG. 26.

Banded flat etches " $\frac{3}{4}$ " white region at 110 lines per inch. Data given in Table M, enlargements in Fig. 28.

photographs of Figs. 27 and 28 are shown; these bear the same identifying numbers as Figs. 25 and 26.

Table O gives the various sizes of dots that shall interpret the true tonal values ranging from dead black to the "whites" at one hundred lines per inch.

Table N, in connection with Figs. 25 and 26, shows how important it is to exercise the greatest possible care at the critical period of the etching, because very small changes in time, from the moment the "crescent" dots are formed, will make such marked modifications in the area of the dots as to (unless overcome by special stops, staging or "short bite" etches) cause the color or tone value to be entirely lost and the result to appear "chalky" and very unsatisfactory indeed.

Between stages 2 and 3 of Table N, the change in area is 58.95; between 3 and 4, 44.22; 4 and 5, 34.99; 5 and 6, 27.11; 6 and 7, 20.58; 7 and 8, 15.57; 8 and 9, 10.80, and between 9 and 10, only 2.04. Fig. 26 predicates the start of the crescent dot with a forty-five-minute etch. It is striking to compare the five minutes from "40" to "5" with the five minutes between "5" and "10," from which it is apparent that, commencing at the "5" stage (40+5) and banding at the same rates given in Fig. 26, all the possible gradation of the crescent dots will be disclosed.

#### SPREADING ACTION.

In tables P and Q are given certain sizes, changing by .001 inch, of engraving dots, the increase of  $\bullet$  dots and decrease of  $\circ$  dots in print-

ing, the percentage values of the modifications and their original tone relation. It will of course be obvious that a spreading action of .001 inch bears a greater relation to a small  $\circ$  dot in its proportion to unit area, and its consequent reduction in size, than the same amount added to the diameter of a small  $\bullet$  dot and the proportion it bears to unit area. For illustration, suppose a  $\circ$  dot of .0026 inch diam-

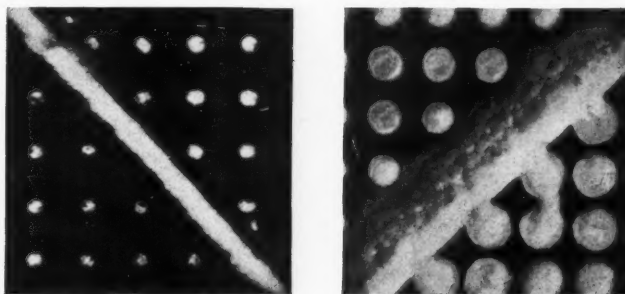


FIG. 27.

Micro-photographs by the author, of Fig. 25, enlarged about 35 diameters. The etched-out portions of Figs. 25 and 26 are filled in with magnesia powder and then photographed 1 1/4, 2 1/4; 20 and 40 minutes.

which is an increase of black of 48.6. This shows how much more rapidly the "whites" darken under the same spreading action of the ink, and it also shows how important it is to relieve the pressure from the  $\bullet$  dots of the whites by means of a good make-ready of either a hand-cut or specially prepared patent overlay.

This spreading action, unless controlled by overlays, is about the same in extent away from any printing surface edge, whether around the rim of the smallest  $\circ$  dot or around the edge of the smallest  $\bullet$  dot; this materially modifies the

tonal value by causing the high lights or "whites" to darken faster, relatively, than the shadows, so that when a flat impression is compared with the engraving, the key of the whole is found to be

the engraving will be found on the printed page. It is not enough to simply remove the pressure in the high lights and retain it up to the middle tones. This will of course show improvement and will do very much to lengthen the life of the half-tone, but it can not in the nature of things produce adequate effects on the interpretation unless there is a corresponding change in the overlay relief for every change in tone value of the engraving.

From investigations made, it can be stated that the overlay thickness is directly proportional to the percentage of black and inversely proportional to the percentage of white. Suppose a maximum range of .004 inch variation in overlay thickness, the proper relief of an overlay adapted to this range and a 100-line engraving would be for the blacks .004 inch; for the quarter-whites or "shadows," .003 inch; the half-whites, middle tones, or "grays," .002 inch; the "three-quarter" whites, .0009 inch (practically .001 inch) and for the smallest ● dots of the "whites," .00025 inch. These values are found by multiplying the maximum range by an overlay constant that is directly proportional to the percentage of black. This constant applies to all lines per inch. Its value for the different tonal qualities is as follows: dead black, 1;  $6\frac{1}{4}$  per cent white (○ dots of shadows), .9375;  $12\frac{1}{2}$  per cent white, .875; 25 per cent white, .75; 50 per cent white (○ dots of grays), .5; 75 per cent white, .25;  $78\frac{1}{2}$  per cent white (birth of "crescent" black dots or beginning of second acceleration), .215;  $81\frac{1}{4}$  per cent white, .1875;  $87\frac{1}{2}$  per cent white, .125;  $93\frac{3}{4}$  per cent white (near the smallest ● dots), .0625, and for 100 per cent white (routed out areas) the constant becomes "0."

The dot diameters corresponding to these tonal gradations at one hundred lines per inch are given in Table O. Whatever maximum range is selected, having regard for the class of paper, the kind of ink and the number of impressions, it is multiplied by the

overlay constant which gives the thickness of overlay to use on the portion of the engraving corresponding to the tone values listed. For practical purposes an ordinary machinist's micrometer is sufficient to measure overlay thicknesses.

(To be continued.)

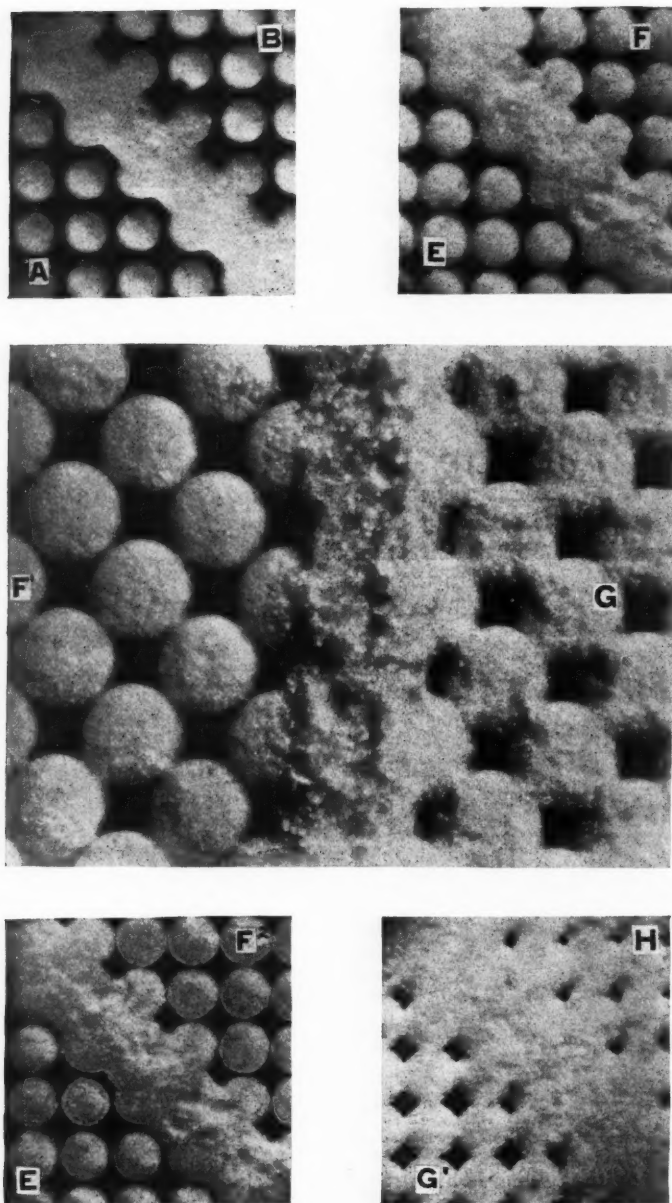


FIG. 28.

Micro-photographs by the author, of Fig. 26, showing five enlargements; four magnified about 35 diameters and one (F1-G) enlarged about 68 diameters, at the various times in the acid listed below: A, 40; B, 40 +  $\frac{1}{16}$ ; E, 40 + 24; F and F1, 40 + 5; G and G1, 40 + 10; H, 40 + 20.

considerably lowered. With an overlay formed so as to reduce the pressure per unit area directly proportional to the tone value of the ● dot areas and inversely proportional to the areas of the ○ dots, the deleterious effect of the spreading action will be compensated and the true tonal relation of

Written for THE INLAND PRINTER.

## MERCURY VAPOR LAMPS.

BY W. D. STEPHENSON.



AMONG mercury vapor lamps, the "Cooper-Hewitt," invented by Mr. Peter Cooper Hewitt, of New York, the outcome of a long study of electrical vacuum phenomena, and recognized throughout the scientific world as one of the most efficient illuminants known, has come into commercial prominence in the past year in many specialized fields of industrial lighting. Placed conservatively upon the market in 1903, the records of its performance since then have fulfilled all the original anticipations as to its reliability and economies, and the popular endorsement of the satisfactory quality of its illumination in these early installations has encouraged its further adoption in various new applications. Recent improvements in design and construction have increased its general utility, and the perfection of a new type of lamp adapted to the great majority of alternating-current lighting circuits has increased its field of usefulness.

When mercury vapor lamps were first put on the market, their interesting scientific features and the attention everywhere attracted by the novel new color and diffused light for a time overshadowed commercial recognition of their industrial value. With the reputation of the lamps as one of the cheapest forms of industrial lighting established, they are to-day being installed in many factories and workrooms, in several standard styles designed to meet specialized requirements of commercial lighting systems.

The records of the performance of the Cooper-Hewitt lamps, covering two years, have demonstrated that their life has exceeded five thousand hours in numerous instances. The New York Transportation Company recently renewed four tubes which had been operated over ten thousand hours each, and three of them were in fair operating condition when returned to the factory, but somewhat blackened from long service. As the only cost of maintenance in mercury lighting is for tube renewals — about one-third the original cost of the complete lamp — the demonstrated long life of the tube gives a new importance to the claims made as to its high efficiency.

Tubes continue to operate perfectly until the vacuum becomes impaired, with no consumption of the light-giving, mercury vapor element. Almost all other methods of artificial lighting require the heating to incandescence of some solid substance, usually carbon, with the loss of much the greater part of the energy consumed, in the generation of heat and the more or less rapid con-

sumption of the material that is made incandescent. Even the life of the incandescent globe filament is but a comparatively small fraction of the demonstrated life of the mercury tube. In the Cooper-Hewitt lamp, a long glass vacuum tube one inch in diameter and from seventeen and one-half to forty-five inches long in the standard types, mercury vapor is excited to a high degree of incandescence by the passage of the electric current with a generation of heat that is reduced to a minimum. The radiant heat from mercury lamps, therefore, is in proportion to lighting capacity a very small part of that given off by incandescent globes or arc lamps, and this high efficiency, which means an all-important saving in current consumption, has incidentally meant also a material reduction in the temperature of workrooms in many installations in which the heat from former lighting methods had been very noticeable in hot summer weather. The operating economy is well established — a candle-power of light for a current consumption of from .55 to .64 watt, proportionately one-sixth the current required by an incandescent globe, one-third that required by an enclosed arc, and one-half that required by an open arc.

In the growth of mercury vapor lighting, considerable attention is being attracted to the peculiar merits of its illumination — the even diffusion of light from a luminous surface of great extent, which prevents the formation of sharply defined highly illuminated areas and deep contrasty shadows, the contraction of the pupil of the eye caused by concentrated points of illumination of other methods; and the freedom of the mercury spectrum from red rays, attributed physiologically as the chief cause of eye fatigue to workers under ordinary artificial illuminants.

The distortion of some color values under the mercury lamp because of the absence of red rays is a matter of no consequence in many phases of industrial lighting, where the accurate determination of natural color values is not necessary, and the advantages of a pleasant soft illumination said to be less fatiguing to the eye than any other light except the homogeneous white of the sun's rays are very important. All artificial illuminants distort color values more or less. The mercury light, its advocates assert, is the only one whose spectrum is deficient only in the undesirable rays. Mercury vapor lamps, however, produce a certain ghastly or greenish color that at first is not pleasant to one unaccustomed to their value.

Lamps of this type have been extensively adopted during the past two years in large machine shops and foundries, where the saving effected in current consumption has been very great; in business offices, in which the superior working quality

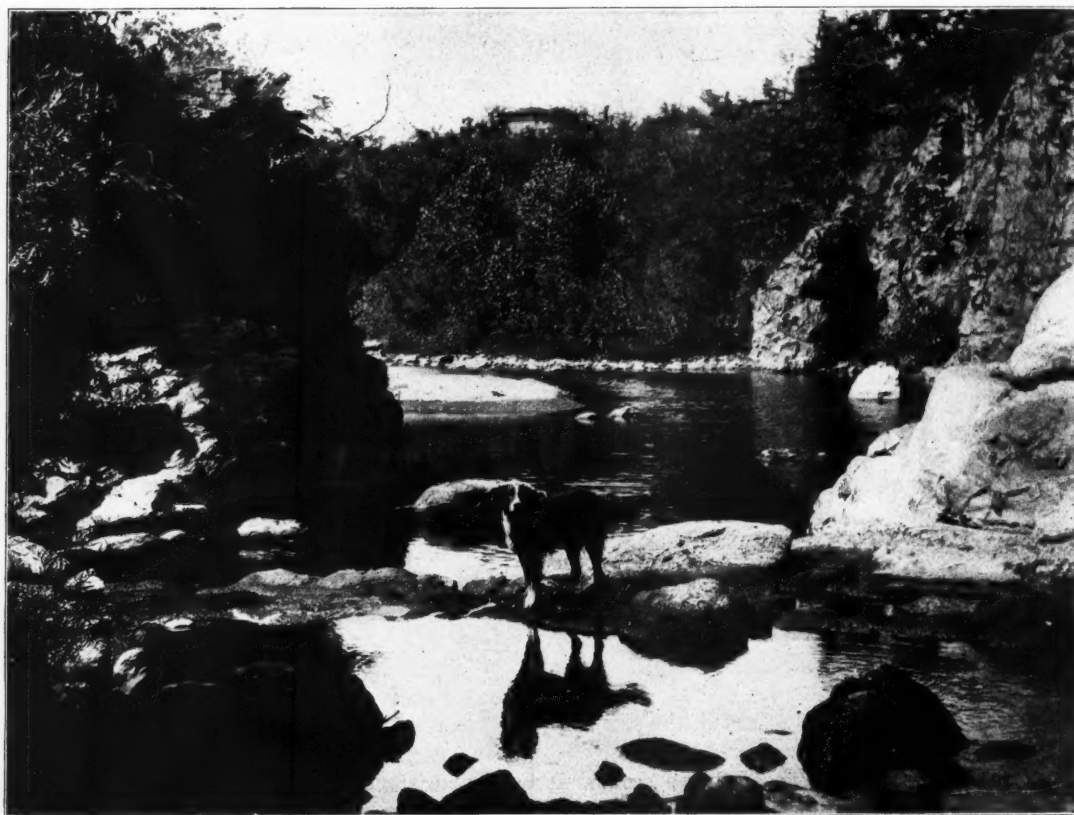


of its light has dictated its use, apart from the consideration of its economy; in the press and composing rooms of many of the largest publishing houses in America, where the disadvantages of wiring around machinery are avoided by its use and three-color printing is not extensively in vogue; in railroad repair shops and in drafting-rooms.

As showing the character of recent industrial installations, there may be mentioned the enlarged

at the Washington Postoffice, where thirty lamps, requiring 105 amperes in all, are in use in the high-vaulted mailing-room, 100 by 200 feet, on the ground floor, in the place of one thousand incandescent globes requiring 500 amperes, with which the room was formerly lighted.

Most of the installations of the past year have been made with 300 and 700 candle-power direct-current lamps, but a new 425-candle-power lamp, for alternating-current circuits, recently put upon



A SHADOW PICTURE.

Photo by E. C. Rensberger, Stockton, Cal.

Newark works of the Westinghouse Electric & Manufacturing Company, where 470 lamps are in use; at the new model factory of the J. L. Mott Iron Works, at Trenton, equipped with 113 lamps. Five of the largest river piers in New York are lighted by them. All the United States Government currency and international revenue stamps are printed (in monochrome, that is, there is no interrelation of color values between different parts of the same plate) under their light in the Bureau of Engraving and Printing at Washington. Another interesting installation is the lighting of the presses and make-up tables in the new building of the *New York Times*, with forty-eight lamps. An example of office lighting is to be seen

the market, is now being delivered for various installations where the advantage of mercury lamp lighting, through current conditions, has not before been practicable. The 700-candle-power lamps are generally operated in series — two in series on circuits of from 98 to 122 volts, or four in series on circuits of from 196 to 244 volts; 300-candle-power lamps are operated singly on circuits of from 98 to 122 volts, and two in series on a 196-244 voltage. Series lamps are arranged with extra shunt resistances so that either lamps of a pair in series may be operated singly if desired. Both types of the direct-current lamps are run at  $3\frac{1}{2}$  amperes, 700-candle-power lamps in series on a 110-volt circuit consuming 385 watts, one 300-



candle-power lamp installed singly on a circuit of the same voltage consuming the same current, and two of these lamps in a series on a 220-volt circuit consuming 770 watts. The new type of alternating-current lamp consumes 275 watts on either 110 or 220 volt circuits, or .64 watt per candle-power.

Mercury vapor lamp outfits, in the Cooper-Hewitt form, consist of a glass vacuum tube, a holder and reflector, and an auxiliary. The tubes of direct-current lamps have a positive electrode, of iron, at one end, and a negative electrode, of metallic mercury, in a bulb at the other end. Tubes of the new alternating-current lamps have two positive electrodes, of iron, at one end, and a negative electrode, of mercury, at the other end, the alternating current entering the vacuum by the positive electrodes and leaving by the negative electrode.

The alternating-current lamps thus, in themselves, operate as a converter, through an application of the principle of negative electrode resistance discovered in the first invention of the mercury lamp. They are started as the direct-current lamps are started, by a temporary tilting to permit the flow of mercury from one end to the other in a small stream which momentarily bridges the vacuum, the resulting arcing of the current vaporizing some of the mercury, and the subsequent steady current flow increases the vaporization and the vaporized mercury is excited to a high degree of incandescence. Many 700-candle-power lamps are now made with a small solenoid or magnet on a suspension bar just above the holder, which automatically tilts the tube when the circuit is closed. These automatic lamps are used in installations in which it would be inconvenient to reach a tilting chain with the hand or a special hook.

In these lamps, the so-called auxiliary consists of two or three coils of resistance wire, an inductance coil, and usually a ballast bulb, all of which are connected in series with the tube. These are enclosed under a neat twelve-inch metal canopy, and fastened securely to the ceiling above the lamp, on a plate attachment having a crowfoot into which the lamp suspension bar is screwed, thus becoming a part of the lamp fixture. The special auxiliaries for series lamps have in addition an automatic cut-out and shunt resistance.

An interesting feature of the ballast bulb of the auxiliary provides economical protection against undue voltage rises by means of a fine iron wire that is mounted in a small glass tube somewhat resembling a miniature incandescent globe, which contains inert atmosphere to prevent oxidation of the wire. This iron wire possesses the property of increasing its resistance very rapidly as its temperature is increased, so that a lamp

protected when such a ballast is connected in series therewith can be used on circuits having a considerable fluctuation of voltage without the loss in efficiency which would be unavoidable if the voltage was controlled by a resistance possessing no such graded temperature correction.

Mercury vapor lamps are used in some instances to great advantages in photoengraving establishments, but where anything but monochromatic work has to be dealt with, in any sort of close interrelation, or where colored objects are to be photographed by the rapidly growing direct-engraving process, which avoids the taking of an ordinary negative and its attendant silver-print by making one exposure with the screen in the camera direct from the object itself, the usefulness of mercury vapor lamps is limited. There is no doubt but that an operator could familiarize himself with the modified color interpretations, much as the china painter has to recognize the color-changes due to firing in the kiln, but such specialized training would do little to broaden the scope of lamps of this type. In their restricted field they are very efficient and are a great service to the trade.

#### MUCK RAKE IN CACTUS CENTER.

We are strong down here in Cactus, on the freedom of the press,  
But there ain't no pencil-pusher runs our civic game, we guess;  
And we've taught one chap a lesson that he never will forget,  
And our weekly paper office has this sign hung up: "To Let."

We all welcomed this young journal, when in our midst it sprung;  
Its owner came from Boston, and he brought out jest one lung;  
He'd have got along jest swimmin' and put money in his jeans  
If he hadn't tried to boss things like them 10-cent magazines.

He criticized our Mayor 'cause he allus wore his shaps;  
And he gave our town officials some down-right orn'ry raps;  
He spoke quite disrespectful of the cowboys from Bar C.  
Who always shot at windows when they rode in town for tea.

He said we needed churches and an orchestra or two,  
And the town'd never prosper till we put a railroad through;  
But the straw that killed the camel was when his plans he laid  
Fer a stop-the-gamblin' movement and an anti-vice crusade.

Well, we waited on the stranger with a brand-new coil of rope,  
And we handed him some language that would shock a Band o' Hope;  
And he streaked off fer the prairie like a kyote, jest hell-bent,  
Which is why the Cactus Muck Rake is an outfit that's fer rent!

—Denver Republican.

#### A TRIBUTE TO SHAKESPEARE.

There is an editor in Boston, a man of very excellent parts, who is of Irish descent—a fact of which he is supremely proud. He is fond of contending that a majority of the great poets had, to a greater or less degree, Irish blood. One evening, while at dinner with a number of friends, he was holding forth on his favorite topic, when he was interrupted by one of the guests, who said:

"At least there was one exception to your contention—how about Shakespeare? Surely, you can't say that he was an Irishman!"

For a moment the editor was taken aback. But, quickly recovering his composure, he replied:

"Perhaps not; but his genius would justify the supposition."—Edwin Tarrisse, in *Lippincott's*.



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IN THE VALLEY.

Engraved by Inland-Walton Engraving Co.



While our columns are always open for the discussion of any relevant subject, we do not necessarily indorse the opinions of contributors. Anonymous letters will not be noticed; therefore, correspondents will please give names—not necessarily for publication, but as a guarantee of good faith. All letters of more than one thousand words will be subject to revision.

### DO PRINTERS' ROLLERS NEED CARE?

To the Editor: BATTLE CREEK, MICH., June 6, 1906.

Among the curious anomalies that have recently developed in the advertising pages of the publications devoted to the interests of the printer, none is more curious than the one which displays a prominent manufacturer of roller composition paying out good money to denounce both the authors and the vehicles of publicity that have devoted space to articles upon the use and proper care of printers' rollers.

One would naturally suppose that anything bearing upon the intelligent treatment of the goods in which he is interested would find the manufacturer cordially in sympathy with its purpose. But no; acting as judge, and jury as well, this one summarily dismisses the practical deductions of an experienced user of his product with the verdict of "tommy-rot."

From the standpoint of a man who argues that the only way to get a good roller is to get a new one, this may be so. Equally sure it is that the man who pays the bills may be pardoned if he takes some little interest in the efforts of those who are voluntarily giving to him the benefit of actual experience in caring for and keeping a good roller constantly good until its season had run. It may be of interest to know that the means advocated have not failed of their purpose during the past nine years coming under the personal observation of the writer.

The article in the May INLAND PRINTER (pages 268-9) was written by a pressman who often takes from his machines, at the close of the season, better rollers than some makers can drop new from their Gatlings. It was in no sense intended as a method of revivifying dead ones, but simply outlined a successful plan for keeping a good roller constantly good until its season had run. It may be of interest to know that the means advocated have not failed of their purpose during the past nine years coming under the personal observation of the writer.

Should the offended Doctor Osler of the roller trade be manufacturing with the same degree of wisdom that he is displaying concerning the actual use of his product after it is manufactured, a muzzle for use in his department of publicity ought to prove a paying investment.

JOHN B. NEALE,

Superintendent Gage Printing Company, Limited, Battle Creek, Michigan.

### NO FREE "PUFFS."

A Western editor has come to the conclusion that the people who desire "puffs" in his paper must pay the following prices: For telling the public that a man is a successful citizen when everybody knows he is as lazy as a mule, \$2.75; referring to a deceased citizen as one who is mourned by the entire community, when he knows he will only be missed by the poker circles, \$1.08; referring to some gallivanting woman as an estimable lady whom it is a pleasure to meet, \$3.10; calling an ordinary pulp-pounder an eminent divine, 60 cents; sending a tough sinner to heaven with poetry, \$5.

Written for THE INLAND PRINTER.

### PARIS NOTES.

BY OUR SPECIAL CORRESPONDENT.



EVER has there been so much disturbance in the French printing world as has been experienced during the months of April and May of the present year. In 1878 a printers' strike occurred in Paris about which the old members of the trade still talk, and which left us as a legacy two tariffs, one formulated by the men and rarely applied, and another more general in its application, imposed by the employers. In 1878, however, the late M. Waldeck-Rousseau had not brought in his law legalizing trade unions, and though the present Paris union existed, it had to be carried on under the guise of a friendly society and was as weak for trade purposes as it was lacking in legal status.

In twenty-eight years matters have completely changed and to-day printers' unions exist in every town in France, bound together in one federation, with its headquarters at Paris. When, therefore, the printers' federation of unions decided not to follow the lead of the General Confederation of Workers in a general strike on May 1 for an eight-hour day, but to devote all its forces to the realization of a nine-hour day, its action was severely criticized by some and its proceeding watched with interest by all.

The various local unions throughout the country entered into negotiation with the employers and in the majority of cases were received in a friendly spirit. Thus in many provincial towns a nine-hour day, fifty-four hours per week, was accorded during the month of April without recourse to violent measures. In certain districts the men were indifferent owing to inefficient organization and lack of unity, and the federation officials had to arouse them into activity. In others, more particularly the industrial regions of the north, the men's demands for a reduction of hours were met with a firm resistance and a struggle in which neither party has yet given way was entered upon.

In Paris, the mixed commission of masters and men had been unable for a long time to come to an understanding, the employers having refused even so late as the end of February to consider the principle of a nine-hour day. During April negotiations were again entered upon, the union's demands being met in a very generous spirit by the employers. Placed side by side, there is, indeed, very little difference between the men's and the employers' proposed tariffs.

The union's demands are: Nine-hour day at \$1.44 per day, 15 1-5 cents per thousand piece work, 6 and 10 cents an hour extra for overtime. Night work, 22 cents per hour; overtime for night shifts, 32 cents an hour.

The employers' propositions are: Nine-hour day at \$1.40 per day, 15 cents per thousand piece work, 5 and 10 cents an hour extra for overtime. Night work, 20 cents an hour; overtime for night shifts, 25 cents an hour.

The Paris committee did not feel justified in accepting the employers' proposals, but immediately referred the matter to the individual members by means of a ballot. At the same time they pointed out the exceedingly advantageous nature of the proposals, there being a difference of but 4 cents a day on the standard wage, 1-5 of a cent on the piece scale and 1 cent an hour for overtime before midnight. A signed agreement between the two parties, which would render all dispute impossible, and the maintenance of all salaries at present above the new tariff, were assured. Compared with the existing scale of \$1.30 for ten hours, a decided advance was obtained and the committee in presenting the two scales to the members did not hide the fact



that they considered the masters' proposition sufficiently advantageous to be accepted.

On the ballot papers coming in it was found that the members were not of the same opinion as the committee, and a strike was immediately declared. A small number of firms immediately acceded on the men threatening to go out, a larger number followed suit within a week and now, a month after the outbreak of the strike, only three large firms remain obdurate. The moral support which would have been obtained from a signed agreement has been lost by the union. Even should the firms at present holding out agree to the tariff there will always be trouble from employers wishing to pay their staff, or the weaker members of it, at the old and still official rate of pay.

The Paris strike has to go on until full satisfaction is obtained, say the union officials, and active measures are being taken to ensure the success of the movement. A tax of 10 per cent of the total earnings of every member of the Paris Society of Compositors is being paid in exclusively for strike purposes, while some other branches of the trade not having any reserve funds to fall back upon have imposed a levy varying from 25 to 50 per cent of the total earnings. Throughout the country no less than 5 per cent is being paid for strike purposes by every member of the federation.

The police authorities evidently consider Paris printers a dangerous set of men when on strike, for no sooner was the strike declared than the prefect placed two or three policemen on guard outside every printing-office in the city. Even the daily newspaper offices, quite unaffected by the strike, and more strangely still, the foreign offices such as the New York *Herald* and the London *Daily Mail*, had a couple of policemen on guard at their doors day and night. No disturbances occurred, not even the first of May being sufficient to cause peaceful compositors to arm themselves with more dangerous weapons than composing sticks.

When the present dispute is over an attempt will be made to revise the news scale. The existing rate is \$2.30 per night of seven hours for Linotype operators, and \$1.90 for case and stone hands. At the same time it is intended to include a scale for English morning newspapers printed in Paris, the minimum to be \$22 per week of forty-two hours for Linotype operators and \$18 for stone and case hands. This is the amount generally paid for newspapers printed in English in Paris, but as certain new arrivals have sought to reduce the amount to the French scale it has been decided to fix a union minimum in order to prevent dispute.

WITH the recurrence of the general elections, French printers have had their powers of production taxed to the utmost and the city walls have had to bear an array of posters such as they will not see again for four years. Paris, usually so stringent in its regulations concerning bill-posting, grants complete liberty — or license — during election time. The tax on election posters is repealed; any or every building may be plastered with bills and the three-foot letters warning the billposter that he must not use his brush there are soon buried under a thick layer of printed paper. Considering that about a third of the job offices were on strike just before election time, it is surprising where all the posters came from. The printers who gave in to the strikers and were running with full staffs must have reaped a rich harvest during the month of May. There are rumors of certain candidates having sent their printing to the South of England to be executed. Should this prove to be true the gentlemen in question will be severely handled by the unions.

To MISS publication only twice in three centuries is a record held by the *Petites Affiches*, a semi-official daily

journal concerned with commercial affairs, the procuring of loans, situations vacant and wanted, and offers of marriage. For three hundred years the paper has been in existence. In 1814 it ceased publication for one day owing to its union with the *Grandes Affiches*. On May 1, of the present year, *Les Petites Affiches* failed to appear for the second time. The printers' strike had largely reduced the number of men available, the printers of the allied paper, *Les Affiches Parisiennes*, were not working on this day, and as the life of Paris was practically at a standstill, the management decided not to issue the paper.

AMERICAN printers will be interested to learn that Paris now possesses a statue to Benjamin Franklin, the gift of Mr. John H. Hayes, an American banker in Paris. The statesman and philosopher who honored our craft is represented seated in an armchair of Louis XVI. style. The pedestal, in pure Louis XVI. style, is the work of an American artist, Mr. Charles Knight. On the sides are bas-reliefs by Mr. Frederic Bron, symbolizing the reception of Franklin by the King of France in 1778 and the signing of peace by Great Britain and the United States. The statue is placed near the Trocadero palace and the Rue Franklin, the unveiling of it being the occasion of a brilliant Franco-American demonstration.



WATERLOW'S PRINTING WORKS, LONDON.



Written for THE INLAND PRINTER.

## LONDON NOTES.

BY OUR SPECIAL CORRESPONDENT.



IN my last letter I had to chronicle an action brought by the firm claiming to be the original builders of the "Cropper" Platen press against trade rivals, and this month have to record the death of Mr. Samuel Thacker, of the Cropper-Minerva Machines Company. It was Mr. Thacker who brought over the idea of the platen press, as we now know it, to Britain from the United States, where he had seen a Gordon press, the principle of which struck him as being the very thing wanted in the then state of the printing trade. The late H. S. Cropper worked in collaboration with him, and the result was the introduction of the "Minerva," or as it has come to be known, the "Cropper," to British printers. For nearly thirty years Mr. Thacker was a partner in the firm of H. S. Cropper & Co., and the business was purchased as a going concern by the sons of Mr. Thacker. Appointed managing director, his practical knowledge stood in good stead. In private life Mr. Thacker's hobby was horticulture, and he was in constant request as a lecturer, and all over the country was known for carrying off the first prizes for the display and grouping of plants. Nottingham is the home of the platen machine industry, and several firms devote their attention to its manufacture, among them Mr. C. Butterfield, who has just brought out the "Planet" platen, an up-to-date machine of a small size, 11 by 7 inches inside chase. The new platen takes up but two feet six inches square of floor space, and is suited for small work. The price is \$150.

MR. C. W. BOWERMAN, the late Secretary of the London Society of Compositors, who was elected M.P. for Deptford at the last general election, has been very ill. He caught a chill on a journey from Dublin, and became seriously unwell. On examination by the doctors, not only were the lungs and other organs found to be deranged, but a form of blood-poisoning also set in, and for days his life hung in the balance, no one but his medical attendants and nurses having been permitted to see him. He is now in a fair way to recovery. Many of your American readers will no doubt know Mr. Bowerman, who was a member of the Moseley Commission that visited the United States a few years ago to study American institutions and methods.

A STRIKE has taken place in the office of the *London Star*, an evening paper that publishes several editions daily. A number of cyclists are employed to take the papers to the outlying suburbs, and these men, who term themselves "Slaves of the Wheel," consider that they are sweated by being paid low wages, and by having sums kept back by way of fines for certain offenses. These men work from 10 A.M. until 6:30 P.M. and occasionally to a later hour, and have to provide their own cycles, keep them in repair, and ride on an average from forty to fifty miles a day. Their wages vary from \$3.50 to \$6.50 per week. The whole question of hours, wages, etc., is to be submitted to the arbitration of three labor Members of Parliament, and before these lines appear in print there is no doubt that the matter will have been satisfactorily settled.

SEVERAL trade matters have been in dispute recently. The case hands and Linotype operators in Belfast made application for an advance in wages, which was refused by the employers, and at a meeting of the men's society the decision was come to to press the claim and to tender a fortnight's notice. The employers are now advertising for men to take the places of the strikers, and an advertisement in a London paper for compositors, at the rate of

wages paid by the Belfast employers, resulted in 345 applications, and another for Linotypists produced more than fifty replies. The Newcastle-on-Tyne bookbinders asked a raise of 48 cents per week, the masters offered 24 cents, and the men accepted this, the new rates commencing on June 1, last. At Swansea, a busy Welsh seaport town, the printers have asked for a reduction of the hours of labor and an advance of wages. A conference on the subject was held with the employers at which both sides made concessions, and an agreement was arrived at and signed under which the new conditions are not to be disturbed for five years.

PRINTERS ought not to complain of bad trade, is the thought that strikes one when considering the number of new issues of books that are being published by various houses. Evidently there is a gold mine in the classics, for we have the "Temple Classics," "Newnes's Thin Paper Classics," the "World's Classics," the "Cameo Classics," "Nelson's Sixpenny Classics," "Harmsworth Library," and others. Fortunes would be speedily made but for the fact that no sooner does one series begin to claim attention of readers than half-a-dozen rival publishers put forth equally attractive editions. And so the game goes on. Surely all can not be successful; some must go to the wall. So much the worse for the publishers. But at least the printer and his kindred trades' associates stand to gain. The taste for literature is being fostered by this means, the appetite for reading grows, the demand for books increases, and it must and will be supplied. If the supplier—be he publisher, printer, or what not—loses sight of his own interests in the distractions of competition, he is bound to come to grief sooner or later. It is all a question of costs and selling price, and it is better to have worked at a profit and died, than never to have made a profit on one's work at all. However, the latest bidders for fortune in popularizing the best of the world's literature are Messrs. J. M. Dent & Co., who issue one thousand volumes at 25 cents each, printed in clear type on the best paper, with distinctive title-pages, tastefully bound, some illustrated and some running to seven hundred pages. These are to be called the "Every Man's Library," and embrace biography, children's classics, essays and belles lettres, fiction, history, philosophy and theology, poetry and drama, romance, science and travel; fiction library, it is interesting to note, being in historical sequence. One hundred volumes are to be published each year. They are also, it is said, to be published in the United States, but at a much higher price.

THE Master Printers' Association has called the attention of the publishing trade and others to the fact that a printer is not liable for the loss of or injury to his customers' goods arising from accidental fire during the period of his having custody of the goods, including the time during which they are in use for work in progress. Also that a printer's liability for the loss of, or damage to, goods while warehousing them, caused by robbery, damp, vermin, etc., does not differ from his liability in the case of loss or injury from fire. Customers' goods generally consist of paper, electro, stereo and other plates, wood and other blocks, completed work, the value of the recomposition of standing type, and the value of drawings upon stone, etc. The customer who has supplied paper should insure it during the whole time it is in the printer's hands. The amount of the policy after the work has been completed should cover the increased value. As to electrotype, stereotype and other plates, wood and other blocks, the customer should insure such goods if manufactured for him by the printer as soon as completed and also all blocks and plates, which have been placed by him in the printer's

possession for use. Standing type in calendars, directories, etc., or in other books kept in type for another edition or otherwise at the customer's request, is usually the property of the printer. The sum paid by the customer for keeping type standing usually does not include the right to require recomposition in case of injury or loss. The cost of such recomposition should, therefore, be insured by the customer.

MR. WALTER HAZELL, a well-known London master printer, of the firm of Hazell, Watson & Viney, Ltd., who have large works, both in London and at the town of Aylesbury, about forty miles distant, is looked upon as the philanthropist of the trade by the workers, and certainly he endeavors to justify the title, as he is continually promoting some new scheme for the elevation or betterment of the men employed in the printing trades. He addressed at some length, the other day, the members of the London Chamber of Commerce upon the advantages of removing their works to the country. The advantages of the country

established in a country town was a more important factor in its life than the same man in a huge London area, without local interests. He found, of course, some disadvantages. In a small population there are less varieties of employment and fewer openings for the ambitious young man to rise. He might feel too dependent upon the uncertain stability of one firm, or even might suffer from the whims of one employer. Some might object to the quietness of a country town, without a theater or music hall. Speaking generally, however, the advantages to the worker were greatly in favor of a country life, and if the employer was also benefitted there was good reason for developing the system. There was nothing new about it. Country factories were growing in all directions. Messrs. Cadbury, at Bournville, and Messrs. Lever Bros., at Port Sunlight, had created model villages, and advised other employers to remove into the country also. Printing was one of the most difficult arts to carry on away from its market, and



EUSTON STATION, LONDON.

were many. Supposing a skilled artisan earned \$10 weekly in London, or \$8 in the country, the extra \$2 was more than consumed if he lives in a cheap suburb at a higher rent, traveling, and the extra cost of meals away from home, and this sum would be exceeded where a son or daughter living at home goes to work. If he lived in central London he spent on still higher rent what he saved on the other items named; against a country town cottage with six rooms and a small garden for \$1.50 a week, he would pay more than this for two rooms in a mean street. The cost of food was approximately the same, being slightly in favor of the country in certain items. When other conditions were considered which can not be easily priced, the advantages of the country were still more obvious. The London workman living in a suburb will often spend two hours a day in traveling; he does not see his home by daylight, except on Sunday, for months in the year. In the country his house will be close by his work, and the home life will be comparatively better. With a better home, less wear and tear, pure air, a cottage garden, or an allotment, and a public recreation ground close at hand, the health and vigor of the worker ought to be greatly improved. If the employment be seriously intermittent, then a small holding ought to enable the worker profitably to employ his otherwise vacant time; or if overtime be necessary, the proximity of his home diminishes his fatigue. A workman

yet every year more printing works were following the example set by Mr. Hazell's firm and others many years ago. Messrs. Waterlow — whose extensive works are in the city of London — had established a country branch at Luton, and many others had done the same — notably Messrs. Wyman & Sons, the Government printers, who have a building covering nearly two acres at Reading.

A NEW daily paper has been started in London with the curious title of the *Majority*. It is to be the organ of "all who work for salary," and is to advance their interests, where possible, against the capitalist class. The promoters make the following curious calculation: "An eight-page daily paper may cost anything from \$5,000 a week, when its circulation is fifty thousand and when its special correspondence is inexpensive because the world is quiet, up to from \$27,000 to \$35,000 a week, if we suppose that its circulation is one million and that foreign events of great interest are happening at the moment, and the expense of Reuter's telegrams and those of its own correspondents are consequently very costly. Fifty thousand copies of a half-penny paper, allowing for returns, would probably not yield much more than \$160 a day or \$2,000 a week, leaving \$3,800 a week to be made up from advertisements if the owner is not to face a loss. If the circulation became a million, then the aspect of affairs would be very different. A million copies would yield about \$30,000 a week from

sales alone, and a grateful proprietor appreciating the support of his readers could afford to put in approved advertisements absolutely free." The new paper does not propose to do this, however, but will, under these circumstances, charge only half rates.

THE well-known Cincinnati firm of printing-ink makers, Messrs. Ault & Wiborg, whose ramifications are world-wide, established a branch in London, some few years ago, in a building in Farringdon Road, but, under the care of Mr. Charles H. Ault, the resident partner, the increase of business has been such that a removal into larger premises has been necessitated, and a new building, erected in St. John's square, E. C., is now occupied by the firm, and fitted with modern and up-to-date plant for the production of printing-inks on the spot. The new factory is situated next door almost to the old gateway of the Priory of St. John of Jerusalem, whose buildings covered an extensive portion of the land in this locality, and, in fact, they rest upon the old-world foundations of the famous priory. When the builders were excavating for the foundations of Messrs. Ault & Wiborg's new factory, they came upon the remains of the old walls, and these were so strongly built that instead of removing them they founded the new walls on them. Another interesting discovery was made at the same time, for it was found that these same old walls had in their turn been founded on the remains of a Roman edifice that had stood on the spot in the early centuries of the Christian era, when Gaul ruled the world. The locality is a central one for London "printerdom," and will enable Messrs. Ault & Wiborg to supply inks almost "while you wait," a distinct advantage to the printer. It may interest readers of THE INLAND PRINTER to know that the excellent and artistic series of colored advertisement inserts, that ran through that journal a few years ago, have been collected into book form and issued as specimens of what the firm's inks can do.

#### PATENT-LAW REFORM.

Our patent laws are not wholly satisfactory, in that they enable a manufacturer to let patents he has bought lie idle, often for the purpose of preventing others from making articles better than his. He has a monopoly under an old patent and doesn't want a rival operating under a new one. So he prefers to buy the patent a rival might use. An inferior article, perhaps, is kept on the market, while the purchased patent is tucked away. It is argued in the *Iron Age* that there should be a right to manufacture any patented article under a license, or that a patent not utilized within a certain time should become void. In England there is an agitation for patent-law reform on the ground that "a German—to take a concrete example—holding a British patent can prevent the manufacture of the patented article in Great Britain, while he is at liberty to produce it himself in his own country and sell it in Great Britain. The progress of industry which the patent laws should assist is too often hampered."—*Baltimore Sun*.

#### THE MAGAZINE BEAUTIFUL.

We can not pass the opportunity of sending our congratulations on the beautiful appearance of the June INLAND PRINTER. This is certainly one of the best printed numbers you have issued, and it is a matter of pride to us to feel that much of the beauty of the journal is owing to the fine appearance of the Champion No. 1 "Pure White" coated paper, used in same. We really do not believe that such results could be obtained on any other paper. Your journal is far in the lead over all others in every respect.—*The Champion Coated Paper Company*.

#### MIXING COLORS.

Blue is the most transparent of the primary colors, red is next, and yellow is very opaque. On account of this transparency blue does not lay evenly, almost invariably mottling on paper of a hard or glossy finish. Either blue powder, silicate of soda, powdered magnesia or pulverized castile soap mixed with the ink will often stop mottling to a certain extent, but the best way is to have special blue made up for the purpose it is to be used. For catalogue covers or wherever permanency is desired, blue should be avoided, both in the ink and paper, as it fades quickly.

It is impossible to print well over a bronzed surface. Even black will not hide it, and if it is desired to have the gold or silver appear as printed upon, the plates must be made so the bronzing can be done last, after all other



ST. JOHN'S GATE, LONDON.

impressions are perfectly dry. Bronze will effectually cover anything.

In mixing a color, the darker ink should be slowly added to the lighter. It takes only a touch of red in yellow to make orange, but a great deal of yellow in red to get the same color. Many pressmen, not realizing this, or not heeding it after they are told, mix up several times more ink than is needed for the job. Also, in testing colors, they frequently waste great batches of expensive ink before arriving at a decision, when enough to cover the disk would be sufficient.—*Wesley's Message*.

#### GOOD AS A SCHOOL.

I have been a reader of THE INLAND PRINTER for several years and have never missed an issue. I can not get along without it. To read it is to attend the best printers' technical school in the world.—*H. Zaspel, Holyoke, Massachusetts*.



## DISCIPLES OF FRANKLIN.

NO. VIII — DAVID B. PYNE.



DAVID B. PYNE was born at Worcester, Massachusetts, April 7, 1837. Four years later his parents removed to Cazenovia, Madison county, New York, where he was educated in the public schools and the Oneida Conference Seminary of the Methodist Episcopal Church. At an early age he commenced work at the printing trade in Cazenovia, finishing his apprenticeship at Syracuse, Onondaga county, New York. Removed to Chicago in the spring of 1855 and took a position on the *Chicago Daily Times*. At the outbreak of the Civil War he enlisted in the service of the United States as a private under Siegel, served during nearly the entire period of the war, was promoted to Second Lieutenant in the regular army, and resigned at the close on account of disability, having been twice dangerously wounded. Mr. Pyne has experienced all the vicissitudes of a printer's life as publisher, journeyman

learned from Booth that his father had bound him an apprentice to him for a number of years. Monday found him at work on the *News*, a pro-slavery paper, and that day the proprietors received a letter from Booth, explaining matters and requesting them not to harbor the boy. This letter they published, and ridiculed Booth unmercifully. The lad was termed "Samuel Rastall, the white slave of Wisconsin," and the "white fugitive from justice." Booth was jailed for his part in rescuing the negro, who reached Canada safely, and Rastall was not molested further. He worked in Chicago occasionally in the late fifties. Madison street was then a street of scattered two-story frame boarding-houses, shaded by large cottonwood trees, and it was the general complaint of the landladies that "We have to walk clear up to Lake street for every blessed thing we need." Mr. Rastall was secretary and treasurer of Chicago Typographical Union eight years in succession, from 1880 to 1887, and was candidate of the United Labor party for County Clerk of Cook county in 1886, receiving twenty-three thousand votes. He invented

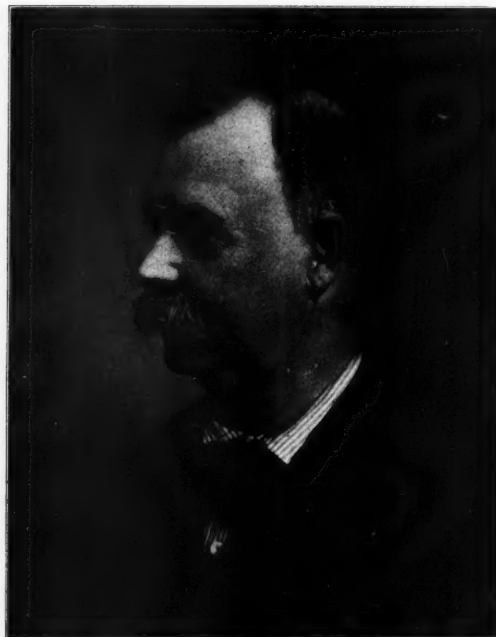


D. B. PYNE.

and itinerant. His home is now at 73 Station street, where he and his wife have resided for the past eleven years. Although now past his sixty-eighth birthday, he occasionally devotes a portion of his time to the "art preservative."

## SAMUEL RASTALL.

Samuel Rastall was born in Cheltenham, Gloucestershire, England, October 4, 1838. He arrived in Chicago in April, 1852, with a band of immigrants and homeseekers who could not find accommodations in the town, and slept upon the floor of Fort Dearborn three nights in succession. He started for Milwaukee, where he learned the printing business. In 1854 a negro named Glover, a fugitive from the South, was captured and jailed in Milwaukee. Sherman M. Booth rode the streets on a white horse calling on all lovers of liberty to rescue the fugitive. This was accomplished by force. Rastall was a rapid and good compositor at that time and started to work on Booth's *Free Democrat*. When he asked for his first week's wages, he



SAMUEL RASTALL.

the alphabet system of type measurement. At this writing, June, 1905, he is still working at the business on the *Chicago Daily News*.

## OUT OF SORTS.

An Illinois weekly recently came out with the following apology:

"On akkount oph the phakt that our new dress oph type was entirely short oph letter ephs and sees when it arrived phrom the typephounders, and that we had diskarded our old phont oph type the minute the new krates kame, we will be kompelled to phlounder along the best we kan until the sorts arrive. We are exseedingly sorry to kause this inkonveniense to our readers, but iph we kould have phound any way to overkome the diphikulty we would have done so.

"This may seem like a joke to you, but it is no joke phor us. We therephore ask you to phorbear phrom kritisism, trusting that the missing karakters will be here in time phor our next issue."





BY EDEN B. STUART.

Under this head will be discussed ideas from all classes of printers, rich or poor, large or small, prominent or obscure, so long as their ideas are of practical value and along this particular line of work. Do not hesitate to consult this department on any problem of estimating that may arise. Printers are urged to forward particulars of any work that will prove of interest and assistance to the trade and to the sender. Address all communications to The Inland Printer Company, Chicago.

The following list of books is given for the convenience of readers. Orders may be sent to The Inland Printer Company.

**HINTS FOR YOUNG PRINTERS UNDER EIGHTY.**—By W. A. Willard. A discussion of the cost of printing. 50 pages, paper, 50 cents.

**EMPLOYING PRINTER'S PRICE-LIST.**—By David Ramaley. New edition, based on nine-hour day. An excellent book to use as a basis for correct prices to charge on any kind of printing, \$1.

**CHALLENGE'S LABOR-SAVING RECORDS.**—Advertising, Subscription, Job Printer's. 50 pages, flexible binding, \$1; 100 pages, half roan, cloth sides, \$2, and \$1 extra for each additional 100 pages.

**FUNDAMENTAL PRINCIPLES OF ASCERTAINING COST OF MANUFACTURING.**—By J. Cliff Dando. The scope of this book is indicated by the title. Has been unqualifiedly indorsed by users throughout the world. \$10.

**ORDER BOOK AND RECORD OF COST.**—By H. G. Bishop. The simplest and most accurate book for keeping track of all items of cost of every job done. Contains 100 leaves, 10 by 16, printed and ruled, and provides room for entering 3,000 jobs. Half-bound, \$3. Must be sent by express at expense of purchaser.

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A. M. W., Norfolk, Virginia, writes: "Since reading your reply to Mr. Gregory's question in the April issue, and noting your invitation, I can not resist the temptation to 'butt in.' I have long been a close student of THE INLAND PRINTER and of late have found especial interest in the Business Office department. Although not in sympathy with your ideas of ascertaining cost or methods of estimating, and while I believe your methods may be something better and a help to the man who has been pricing his product by a system (very poor) of guessing, still I very much doubt if our best and foremost printers could have ever attained the degree of financial success that has marked some of them had they based their product upon your principles of cost and twenty-five per cent profit. Not that I do not consider twenty-five per cent a fair profit (if it is profit) above real cost, for I consider it more than fair and more than it will ever be possible to obtain under the present competitive system of doing business.

"My idea is that general expense is something that is entirely separate from and can in no proper or equitable way be governed by the cost of productive labor so long as the variable factors of operating and maintenance apply in different degrees to different machines or parts of equipment used in connection with productive labor; and I contend along with Mr. Gregory, that the item of general expense of operating a cylinder press or any other machine should be the same whether it was being run by the pressman at \$24 or an apprentice at \$6; the only difference to be made is the difference of the cost of productive labor, not general expense. According to your method of adding one hundred per cent to productive labor to get the cost of any or every part of production that appertains to printing, you lead your readers to believe that it costs but very little more per hour to run a 29 by 42 cylinder than a 10 by 15 jobber.

"Let us stop for a moment and see how this would work out: We will say for the sake of argument that the cylinder could be run for a productive labor cost of \$16 per week and the jobber for \$10; this gives us a cost of about 30 cents per hour for the cylinder and about 20 cents for the jobber; adding one hundred per cent general expenses to these figures, gives us 60 cents for the cost of the cylinder and 40 cents for the jobber. Now add twenty-five per cent profit, and we have 75 cents per hour and 50 cents per hour. Does any employing printer believe he can sell the product of these two presses at the figures and under the conditions named and realize a profit of 25 per cent?

your system of estimating. It is not close enough to right, truth and justice, for it shoulders upon the class of labor in connection with which there is very little important equipment used, a cost which makes this class of labor prohibitive; while upon the other class it cuts off a proportion of cost which it naturally should bear, and unless we can sell just the right proportion of both classes of labor to make them balance up evenly, is not the seller the loser? And in any case is it fair to charge the customer that uses only the one class of labor more than it rightly should cost in order to enable us to do some work for another customer at less than it should rightly cost? And after all are we



A PERSIAN MASSEUR.

"I do not think I could illustrate more forcibly the fallacy of your system of finding cost and making selling prices than in the following case in point: Take a girl at \$6 per week with no other equipment than a bone folder, a chair and a table, and we are prepared to do folding at a cost of about 22 cents per hour. Now take the same girl, at same wages, and put her on a \$1,500 folding machine which consumes power to run and to which is applied a very much larger proportion of interest, depreciation, insurance, etc., than applies to the bone folder, table and chair, and which has a productive capacity of from four to twenty-four or more times that of the hand folder, and we have the same cost of 22 cents per hour. Think of selling the product of that machine at 22 cents plus twenty-five per cent profit, or about 30 cents per hour! Now I hold that in the first instance we would be charging too much, while in the latter not nearly enough, and therein lies the fault of

not just fooling ourselves by such a system? Do we really know what our true cost is?

"What we need is a system of ascertaining cost of and pricing our product that is so true and just that these very elements will so strongly appeal to the vast majority of printers as to make the system acceptable to them as a basis upon which to work. A system back of which they can firmly entrench themselves, feeling convinced that they have eliminated to the greatest possible degree every principle of guessing and to the truth of which they can conscientiously adhere. A system which does not depend upon certain conditions for its accuracy or value, but which is amenable to all conditions. A system by which *each shop can correctly ascertain its own per hour costs for every class of labor and product.*

"Such a system I will attempt to outline in a later communication."

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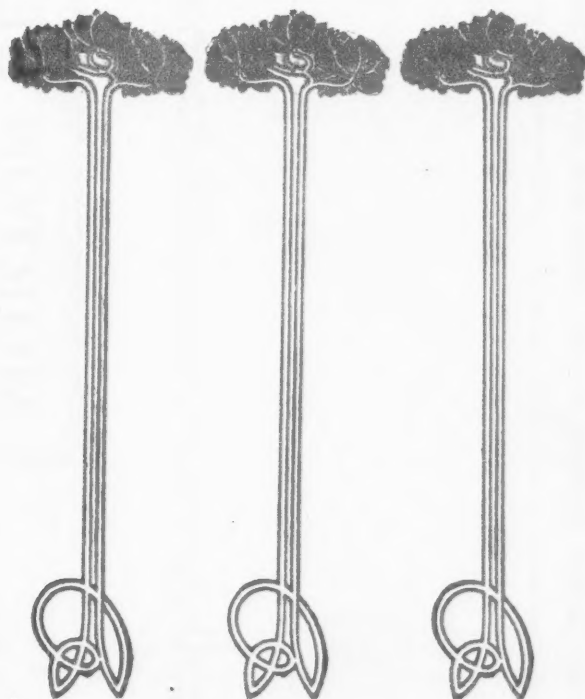
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Men do not attain perfection by striving to do something out of the common. Perfection is acquired by doing common things uncommonly well.

A characteristic feature of much of the printing of the present day is the lack of harmony to be found therein.—harmony of type-faces, harmony of shapes, harmony of tones or colors, in fact, harmony of every kind, being sacrificed in the attempt to attain "originality" even though the results be conspicuous by their freakishness rather than by any beauty of design or color whatever. This is not only confined to the classes of printing which allow greater freedom in the use of decoration and color, but is found in assortments of type ornaments and cuts which are thrown somewhat indiscriminately into business stationery which should be modest and dignified in appearance rather than a mixture of what the office affords in the way of ornamentation.

A few definitions from "The Principles of Design," by Ernest A. Batchelder, will greatly assist our understanding and appreciation of what harmony means in relation to printing:

"Tone harmony occurs when tones sharing some common quality are used; or lacking this, the differences may be reconciled by varying the quantities of the tones used.

"Measure harmony comes from the use of measures having some common unit of division; or again in the cutting of large measures in such way that they will keep their proper plane in the composition.

"Shape harmony results from the use of shapes having some common character in lines or areas."

In the use of initial letters frequent illustrations of the lack of harmony are found. In this connection the

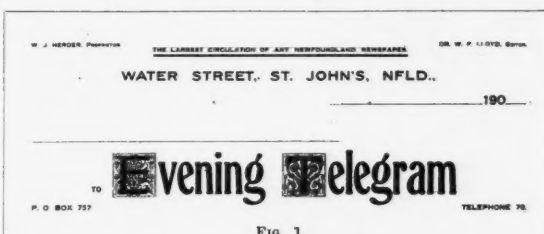


FIG. 1.

first consideration should be the harmony of the type-face with the initial, and this should naturally suggest the fact that for a page on which the text is in old-style a letter of modern cut is wholly inappropriate. Where a plain initial is to be used, a larger size of the type-face used

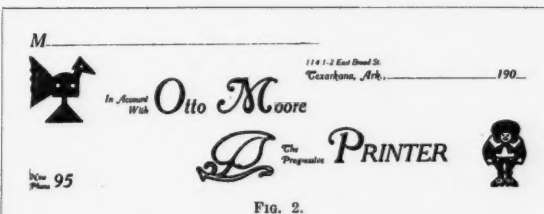


FIG. 2.

in the text is always productive of harmonious results. Where decorative initials are used, the most pleasing results occur when the shape of the initial conforms to the shape of the type-page. The tone harmony of the initial and the text is a thing often overlooked although of the utmost importance. In Fig. 1 are found the results of lack of consideration of shape harmony, measure harmony or tone harmony. The shape of the initial itself, together with the surrounding decoration, is not in keeping with the balance of the line, the size of the initial is not proportionate to the whole, and the tone, by virtue of the delicate

ornamentation and the fact that in the original the letter proper was in red, is, to say the least, rather a weak combination.

The use of decoration on business stationery should be carefully considered and it should be in harmony with the style of type used or have some relation to the business for which the stationery is intended. But the use

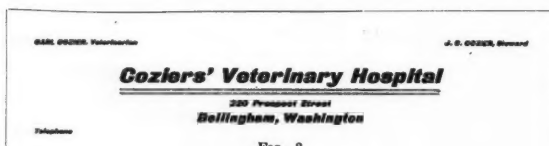


FIG. 3.

of ornamentation simply to "fill up," and that without regard to tone harmony, shape harmony, or the appropriate use of the decoration, should be avoided. In Fig. 2 an example of this style of stationery is found. While it is possible to find a plausible theory for the association of these ornaments and the type-face, and while the leaf and stem decoration is thoroughly in keeping with the italic, it is rather hard to find wherein the angular bird possesses anything in common with the balance of the job, to say nothing of the fact that the ornaments are not particularly appropriate in connection with the printing business, nor is there any call for this amount of decoration on stationery that should be dignified and business-like.



FIG. 4.

Fig. 3 is a striking illustration of the failure to consider the harmony of rule and type-face. The definition of harmony as "having something in common" surely is not applicable to the underscoring of this heavy, bold type-face with a hair-line rule. This is an error frequently found, not only in the use of rules for underscoring but in the construction of panels. A little thought given to the employment of rules which are appropriate in weight to the type-face will be amply repaid in the appearance.

An inharmonious association of type-faces, together with the use of decoration far removed from the type-face in whatever phase of harmony it is considered, is found in Fig. 4. The bringing together of the heavy, angular letter and the delicate italic produces a particularly unpleasant feeling, as does the association of the hair-line decoration with the word "concert." The whole

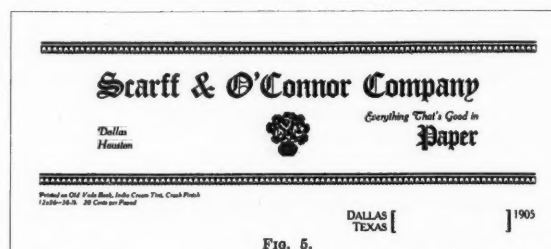


FIG. 5.

forms a mixture of heavy, stiff rules and type with delicate ornamentation and italic which is far from pleasing.

Figs. 5 and 6 show, in marked contrast to the preceding specimens, a harmonious association of type and decoration.

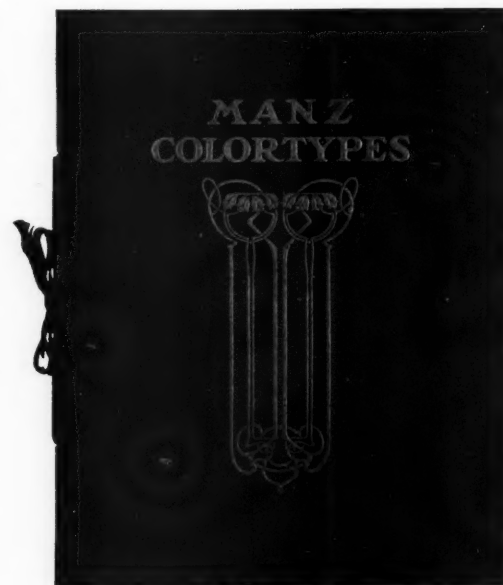


FIG. 6.

Fig. 5, in the original of which the initials in the feature line and part of the ornament were in red, with the balance in black, gives a pleasing harmony of shape and tone. While the ornament in itself is no more appropriate for the business than was the decoration used in Fig. 2, it does not afford the unpleasantness one experiences in the sudden change from the graceful italic to the angular ornament. Fig. 6 is an exceptionally interesting example of the use of letters and ornaments which, having something in common, are harmonious.





BY JOHN S. THOMPSON.

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**FURNISH GOOD COPY.**—The *Western Publisher* says: "If you have put in a new typesetting machine and are standing behind the operator and wondering why he

doesn't get up some of those five and six thousand per hour you have heard about, take a look over his shoulder at the copy you have given him to set. Does he have to fold it? Can you read it at a glance? Is it written on a typewriter, or with a light pencil, lightly held? Does it contain marginal notes, written sidewise and endwise and crosswise? To keep a Linotype going the operator finds it easier if he is not obliged to study and translate and cuss the copy. There is no one thing that will take the ambition out of him like illegible copy. If it is easily read it will put money in your pocket as well as his."

**TABULAR WORK.**—A Kansas operator writes: "Would you kindly advise me as to the best and quickest way of lining up two, three, four and five columns of reading, names and figures on one slug?" *Answer.*—It is not practical to do this with any degree of speed, especially more than two columns. In this instance the first half of the line is assembled without spacebands until the assembler slide reaches the mark made to indicate half measure, and then the balance of the line is assembled in the usual manner with spacebands. You will get only a fair alignment of the columns in this way, as it is not possible to get an absolutely correct justification of the first column. The only way in a multiplicity of columns is to set each section requiring independent justification on separate slugs and cut them down to size.

**LINE-DELIVERY CARRIAGE.**—A South Dakota operator writes: "The machine was in an awful condition when I got here. The operator was pulling the line-delivery carriage back the last inch by hand; the line-transfer finger was not pushing the spacebands under the pawl; the pawls in the spaceband box were worn unevenly; there was half a galley of bent matrices; the guides in the magazine were bent and matrices were running in wrong channels, and everything everywhere was loose. I tightened and adjusted and wiped and oiled; cleaned magazine and matrices; took off keyboard and cleaned it thoroughly, and after ten days she is running like a bird, with one exception. The line-delivery carriage will not go far enough over into elevator. A fairly tight line allows the last matrix to jump off and bend up. It is a new-style machine and I looked for the adjustment in the track and found it inside the channel—a block and a set-screw—but the carriage did not even touch it. I took it off entirely, but it made no difference. Everything else I have been able to fix but this. What shall I do with it? I have overcome it by setting the line gage at 12¼ ems, but that, while it saves the matrices, is not satisfactory, as it makes so much hand spacing." *Answer.*—If the machine starts into action before the last matrix in a line is fully inside the first elevator pawls, the result will be destruction of the end matrices. To test this, throw in the controlling lever and send the line delivery carriage over. Then go around to the back of the machine and see if the roller on the line-delivery carriage lever knocks the stopping pawl off the stop-lever more than 1-64 inch. If it does, the machine will start too soon. Adjust by means of the plate carried by the stopping pawl against which the roller strikes. This adjustment must be looked after whenever the position of the arm is changed in readjusting the split bearing to return the line-delivery carriage properly, as any change in its position affects the adjustment of the starting pawl.

**TEN THOUSAND AN HOUR.**—Adolph Werckenthin, a graduate of the Inland Printer Technical School, on the Atchison (Kan.) *Globe*, writes: "It gives me genuine pleasure to be able at this time to report further progress, by means of this clipping from to-night's *Globe*: 'A Lino-

type machine at the *Globe* office, operated by Adolph Werckenthin, turned out 850 lines from 12 to 2 P.M. Saturday. This is equal to over four columns of type, and measures over 21,000, using the old minion measure of the hand-type days. The *Globe's* machine type is minion on brevier body; that is, minion leaded with twelve-to-pica leads. The mill is speeded to eight lines per minute. This machine is used for advertisements, set in black letter, every day; also an average of six complete changes to nonpareil and minion, daily, to turn out legal notices of all kinds for State, county, city and banks; baseball



A. EBERT.



ROBERT SUTTON.

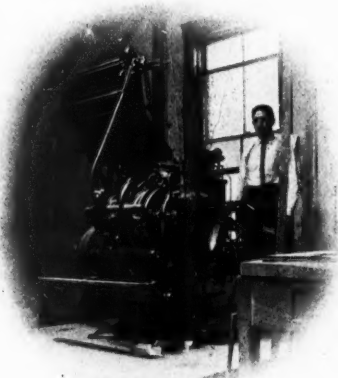
RECENT GRADUATES, MACHINE COMPOSITION BRANCH, INLAND PRINTER TECHNICAL SCHOOL.

scores, markets, want advertisements and tabular work, in addition to regular straight reading matter. The care of both mills in this battery also devolves entirely upon me and I find it a pleasant task at all times. Average daily output of machine No. 1, just referred to in detail, is 2,500 lines, linometer measure. On days when the bulk of the copy for No. 1 is straight reading, manuscript, typewritten and reprint, the output is 2,700 to 2,800 lines, always including the mail list, which goes in nonpareil black letter. We use natural gas and with the Linotype thermometer the machine governors are readjusted weekly to a temperature of 540° F. The new crucible for No. 1 was placed as you suggested and is giving perfect slugs. I have found by experience on fifty different machines, from the old Baltimore to the double-decker, that I was better equipped when I graduated from the Inland Linotype school, nearly four years ago, to work as machinist-operator than the average Linotypist I encountered. Out of a possible two hundred and fifty, only a half dozen were skilled and thorough and turned out 2,000 lines per day all the time, and they studied and applied information contained in the Inland Printer School instruction book, the 'Mechanism of the Linotype,' which is for sale to operators everywhere, as well as students in the Technical School. The three months of my time invested in the Inland Printer Technical School I have found was the wisest step of my fifteen years' experience in the 'art preservative.'

"Inland" professors now exult  
To see their teaching's good result.  
'Tis true and well that all things go  
When once the proper way you know.

The proper way is positively and very clearly demonstrated to all comers who enroll in the school, and every student who means business has the opportunity of his life thereat. The *Globe* battery is nearing the second anniversary of its installation and has given splendid satisfaction; the total average output for the first year was 3,600 lines per day, and at present the output is 4,000 lines per day and over; the largest of any one day was 4,300."

SECOND ELEVATOR AND SPACEBAND ADJUSTMENTS.—H. G. W., Bowling Green, Ohio, writes: "(1) I notice that the second elevator on my machine goes up with a bang; what causes it and how is the adjustment made? (2) What causes spacebands to pi before reaching the box, and must the lever always be pushed to the right in order to lock it? (3) I need some sorts. What do extra matrices cost, also spacebands?" *Answer.*—(1) There is a cushion spring which operates on a rod just beneath the right-hand end of the shaft on which the second elevator is mounted. If the spring is broken, it will not steady the elevator in its ascent. The nut on the rod can be adjusted so that the spring is compressed sufficiently to steady the lever when it rises. (2) The trouble in both instances is caused by misadjustment of the levers which transfer the line of matrices to the second elevator and deliver the spacebands to the spaceband box. The line transfer lever is operated by the double cam near the driving pulley. In some machines the roller which rests against this cam (the inner one) has an eccentric pin. This can be adjusted so as to cause the transfer slide, after a line has been transferred, to be retracted far enough to the left to lock itself behind the trip lever in the top guide for the first elevator. In other later machines there is no eccentric pin, but the bearing for the arm is split and the screw which holds it can be loosened and the whole arm moved and the roller located so that the lever will make the proper stroke to lock the transfer slide. The spaceband lever, however, is not moved by a cam, but is connected by a turnbuckle to the transfer lever, and this turnbuckle must next be adjusted so that the pawl delivers the spacebands just beyond the point of the inclined rails in the distributor



HERMAN COONS, I. P. T. S. GRADUATE, AND MODESTO (CAL.) "HERALD'S" DOUBLE-DECK LINOTYPE.

box. This will permit the lock to be pushed inward to lock the levers when recasting, etc., without drawing the spaceband lever back by hand. Now adjust the screw in the transfer slide which strikes against the spaceband lever when the levers come together to push the spacebands under the pawl, so that the bent finger on the transfer slide passes into the slot cut in the pawl and comes within one-eighth of an inch of the bottom of the slot. (3) Matrices cost 3 cents each for single letter and 4½ cents for two-letter. Spacebands cost 85 cents each.

#### RECENT PATENTS ON TYPESETTING MACHINERY.

Two-letter Matrix Rail.—P. E. Kent, Utica, New York, assignor to Mergenthaler Linotype Company, New York city. Filed October 20, 1905. Issued May 22, 1906. No. 821,296.

## THE ANTITYPO.

An amusing story in a recent issue of *Newspaperdom* describes the difficulties of a country printer with his compositors, and how, through the pi-ing of a form, and the carrying off of the type by a boozing printer, he determined to have a composing machine. He was too poor to buy one, but set to work and trained ants to do the business. How he managed it is told as follows: "Ants in Arizona are as plentiful as grasshoppers in Kansas, and so I collected a sufficient number and put in two hours each day in training them to carry type. It was slow work at first, until the ants became accustomed to my regular visits, and began to know me. They are real affectionate critters and possessed of more sense than some humans. After I had succeeded in training them to carry the type and deposit it in my hand, I next took up the work of colonizing them. I divided them into groups of twenty. I prepared a series of small runs or troughs leading to tightly enclosed colony houses. I painted each house a different shade, ten in all, mixing with the colors various flavoring extracts; I also painted the runways. The tops of the houses and rails of the runways I coated with tar. This insured they would not cut corners or cross lots.

"I trained a colony at a time, using sugar and meat to attract them to their homes, until the ten colonies were well organized. I then made a duplicate section, and proceeded in like manner until I had trained ninety families. I divided the groups of colors with higher compartments, cross-checked the houses and runways, and in this way succeeded in making distinction between them. The variation of flavoring was the most difficult portion of this task, but calling into use some harmless extracts from the drug store, I succeeded. Ants have a keen sense of smell and sharp eyes. They are naturally lovers of the home and lead the simple life. They are not good mixers. When one of them wanders away from his own hill to a neighboring hill, the chances are that before he is down the hole an inch he will learn of his mistake and come out on the bounce with about sixteen on top of him. They have a system of protecting their stores from invasion and stand for no intrusion. They will meet an ant from a neighboring hill on the path and pass the time of day or exchange glances without disturbance, but that is as far as it goes — no taking each other home to dinner, or anything like that. Selecting my colonists from ninety different hills, therefore, you see, I was sure to keep the families separated.

"Having my force organized, I resumed their early training of carrying type, and it was but a short time till they would carry a type down the runway from the house and deposit it in a stick which I held in my hand. The signal to start from the house was given with a tap of a lead pencil on the roof of the house. Finding this plan slow, I rigged up a keyboard, consisting of a series of flat sticks with a wire running through one end, arranged them in banks, and labeled them. The sticks or key-levers were supported at the outer end by strings which passed through an arch extending above the houses. Fastened to the end of the strings was a great primer quad. Touching the key raised the quad, and as it was released it fell with a thump on the housetop.

"In less than a month's time I was making splendid progress. To keep the infrequently used sort colonists in practice, I each day gave them a little exercise, distributing later the type they delivered. It was while exercising them one day that I happily discovered that the colonists could distribute as well as set the type. Hand distribution was quite slow, I having to first distribute the type in a regular case and later transfer it to the colony houses. Depositing some of the pied sorts on the 'plaza,' as I termed the board

where the turn was made after the ants had finished their task of bringing the type out and delivering it, and going about some other task for the time being, to my astonishment the sorts had disappeared upon my return. Placing a handful of dry type on the 'plaza,' I awaited results. Attracted by the familiar odors of the type which had been carried back and forth over the various runs and handled by each family only, the plaza soon swarmed with my little industrials. They grabbed right and left, and in a jiffy the board was clear and the type was safe in its proper place.

"Hurrah! My vengeance is complete. Avaunt with the square man! Back to the ties and the brake-beams, Billy O'Keefe! I danced in glee. Behold the marvel of the century — the Antitypo.

"My joy knew no bounds. Visions of wealth by forming a company, selling stock, getting a patent, and all that, came to me. The following few months it was a most interesting pleasure to edit the *Stockman*. I never thought of writing copy. I would sit down to the Antitypo, compose my matter as I went along, and the little red slaves seemed to make merry of their work of delivering the type to my stick in response to the key taps. I kept the quads and some extra spaces at hand to justify the lines.

"At this point in my story I want you to imagine you see three stars with a nonpareil on each side, because the scene is about to change.

\* \* \*

"One summer afternoon I received a caller — no less a personage than George Washington MacFarland. Mac said he'd been lifting sods on the Tombstone *Epitaph* for several moons. The editor, Bill Hattich, was mad at him. Mac said he just couldn't stand for that. He had known Bill since he was a yellow-headed kid, and before he would stay there and argue it out with Bill he decided to hit the pike. He wanted to know how work was in Wilcox. I told him there was nothing doing, and with pride bubbling over asked him to step back into the room and I would show him why. Seating myself at the Antitypo, I began work. When Mac saw those ants coming forward with type on their backs, depositing it in the stick and returning, his eyes bulged out; he gasped and staggered against the stone.

"For God's sake, Charlie," he said, "I don't mind the ordinary kind, but the cut is switched on me this time. They are shorter than snakes, and I see legs, too — and — and — is that type — ?"

"At this point poor Mac fell on his side against the runways of the Antitypo. I heard a crushing sound as he fainted away. I concluded he had broken a rib. Carrying him to a seat, I did my best to bring him to. The sight was too much for him. He thought he had them, and it was several hours before I sobered him up to his senses.

"When I returned to the Antitypo, all was chaos. The ants were running wildly about; they gave no heed to signals; the stampede was complete. And the cause of it all — the irony of fate. The crunching noise I had heard when Mac fell against the runways was not his rib, but the breaking of a pint bottle of 'booze' he was carrying in his inside pocket. The alcohol had done its deadly work. My colonists, true to their calling, drank long and deep of the trickling red-eye, and every six-footed son-of-a-gun went bughouse. They never regained their senses, and before I would attempt to train a new lot, I decided to come out of the business."

## BEST THAT MONEY CAN BUY.

Send me THE INLAND PRINTER — the best publication the "coin" can buy. I do not care to endure further self-inflicted punishment by doing without it.—*Carl L. Matheson, Statesville, North Carolina.*





BY O. F. BYBEE.

Editors and publishers of newspapers desiring criticism or notice of new features in their papers, rate cards, procuring of subscriptions and advertisements, carrier systems, etc., are requested to send all letters, papers, etc., bearing on these subjects, to O. F. Bybee, 1881 Magnolia avenue, Chicago.

Workmen in every branch of the printing and allied trades are requested to file their names, addresses and qualifications on THE INLAND PRINTER'S list of available employees. Registration fee, \$1. Name remains on list and is sent to all inquirers for three months; privilege of renewal without further charge. Employers are invited to call upon us for competent help for any department. List furnished free. Specification blanks on request. Enclose stamp when inquiring for list of available employees. Address, The Inland Printer Company, Chicago.

The following list of books is given for the convenience of readers. Orders may be sent to The Inland Printer Company.

CHALLENGE'S LABOR-SAVING RECORDS.—Advertising, subscription, job-printers'. 50 pages, flexible binding, \$1; 100 pages, half roan, cloth sides, \$2, and \$1 extra for each additional 100 pages.

THE STONEMAN.—By C. W. Lee. Latest and most complete handbook on imposition; with full list of diagrams and schemes for hand and machine folds. Convenient pocket size. 155 pages, \$1 postpaid.

STARTING A PRINTING-OFFICE.—By R. C. Mallette and W. H. Jackson. A handbook for those about to establish themselves in the printing business and for those already established. Cloth, 90 pages, \$1.50, postpaid.

GAINING A CIRCULATION.—A book of 60 pages; not a treatise, but a compilation of more than five hundred practical ideas and suggestions from the experiences of publishers everywhere, briefly stated and classified for practical use; a valuable aid. Price, \$1, postpaid.

ESTABLISHING A NEWSPAPER.—By O. F. Bybee. Not only a handbook for the prospective publisher, but contains suggestions for the financial advancement of existing daily and weekly journals. Covers every phase of the starting and developing of a newspaper property. Cloth, 114 pages, \$1.

PERFECTION ADVERTISING RECORD.—A new and compact book for keeping a record of advertising contracts and checking insertions, suitable for weekly and monthly publications. Each page will carry the account of an advertiser two years. 200 pages, 7 by 11 inches, printed on heavy ledger paper, substantially bound, \$3.50, prepaid.

PRACTICAL JOURNALISM.—By Edwin L. Shuman, author of "Steps Into Journalism." A book for young men and women who intend to be reporters and editors. It tells how a great paper is organized, how positions are secured, how reporters and editors do their work, and how to win promotion. There are chapters on running country papers, avoiding libel, women in journalism, and on the latest methods of big dailies. Covers the whole field of newspaper work, and tells just what the beginner wants to know. Cloth, 12mo, \$1.37, postpaid.

THIS unusual paragraph appears in the publishers' announcement at the head of the editorial column of the Lodi (Ohio) Review: "Devoted to the interests of Lodi and vicinity, intended to be a legitimate newspaper. Items of news worth sent in good faith welcomed. Items intended to 'dig' people not welcomed."

CONGRESSMAN CRUMPACKER, of Indiana, has introduced a bill into the House of Representatives which provides that persons charged by the government with fraud shall have the right to a trial. As the law stands now an individual or firm may be deprived of the use of the mails if in the opinion of the Postmaster-General they are guilty of fraud. The new law would not or should not necessarily mean that every one who should be deprived of the use of the mails must have a trial, but that it will be their privilege to ask a trial if they desire. Undoubtedly those whom the Postmaster-General brands as frauds would in nearly every case (in their own minds, at least) admit that they are guilty and be willing to submit without further publicity, but the rights of the citizens should be safeguarded against error of judgment on the part of any one person or official.

POSTMASTER-GENERAL CORTELYOU'S recommendation to Congress that a commission be appointed to inquire into

the subject of second-class matter has aroused great interest in all publishing circles. The question of second-class rates has become greatly complicated, and so many points are left to the discretion of the officials that a conflict of rulings has many times resulted. This is a step that should have been taken long ago and is one in which every publisher is vitally interested. The movement for a revision of the law has led to the forming of a national organization of the publishers, managers and editors of weekly newspapers, known as the "American Weekly Publishers' Association." The organization is unique inasmuch as there are no dues or assessments, and it is hoped that every publisher of a weekly newspaper in the country will become identified with it. Full particulars and application blanks may be secured by addressing the association at Room 413, 80 Dearborn street, Chicago.

THERE is so much being said about "graft" nowadays, that the following item from *Newspaperdom*, entitled "Uncle John's Logic," is particularly apropos:

See that Cigar the Publisher is smoking, with a Pretty Red and Gold Obesity Belt? He only smokes that kind when the Paper Salesman is around. It is Honest Graft. Want to know what that is, children? The word "honest" is a Typographical Error for "non est" (for example, "an non est publisher"), meaning there is no such thing. Write your favorite Editor for the meaning of "Graft." He will look in his Dictionary and find this: "Graft: something Annexed to a tree which does not Belong to it." So he will answer your Question this way: "Graft is something annexed by a man which does not Belong to him." Then you will say, my, my, but doesn't he know a lot? If you want to know things, children, be an Editor; but if you want to Get things, be a Publisher. Class dismissed.

SUBSCRIPTION RECEIPT.—Publishers will be interested in the accompanying receipt blank used by the Troy (Pa.) Gazette-Register. The publishers write as follows:

THE INLAND PRINTER, Chicago, Illinois:

DEAR SIRS,—We wonder how many of your country-publisher subscribers are using a newspaper receipt like the one herewith. We plugged along for nearly twenty years writing stubs for our receipts to subscribers. Then

Received of		Troy, Pa.,..... 190 \$.....	
Dollar for the			
GAZETTE-REGISTER ADVERTS		Troy Gazette-Register	
Are effective in selling and leasing farm and village property, securing help and selling all kinds of personal property		to..... 190 from.....	
40 WORDS OR LESS		and..... one year.	
25 Cents a Week		COLES & VAN KEUREN,	
		Per.....	

we installed this manifold system. The week's receipts make one item in the cash book and it tells a lot. Whether receipts are keeping up with earnings, how they compare with other years, etc. We file the manifold copies as a safeguard against misunderstanding with our subscribers.

Very truly yours, COLES & VAN KEUREN.

These receipts are bound in little books, every alternate leaf being blank. A sheet of carbon paper is used when writing a receipt so that the written portion appears on the blank leaf, which remains in the book as a permanent record of subscription receipts. Has any publisher a better system? If so, send me a description of it and I will be glad to publish it.

THE physicians in Lake Geneva, Wisconsin, used to advertise; then they stopped, but now they are again advertising. When they took their cards out of the local newspapers, the newspapers decided that the title "Dr." was also an advertisement, and in order to be consistent concluded to substitute "Mr." whenever they had occasion to refer to one of the profession. The medical men were not long in discovering a reason for changing their views.

At a recent banquet of the Sussex Press Club, of Lewes, England, a very unique menu was furnished by the Sussex



THE San Francisco earthquake and fire have passed into history as the greatest calamity to befall a single city in the country. The newspapers there suffered greater loss than did those in other great fires, and yet it can not be

Mr. Mayes will himself be a contestant, but as the advertiser is fictitious he will have no advantage over other contestants. Such a contest will afford an opportunity for composers to show their talents not only as composers but as ad.-writers as well, and will be a means of helpful education for all. It is regretted that the size of the ad. as well as the wording can not be left to the compositor, but it will be necessary to have the ads. of uniform size to facilitate the handling of the usual large number of specimens. Then, too, it is necessary to restrict the size to a rather small sheet for the same reason. The same rules which have so satisfactorily governed previous contests will be followed as nearly as possible:

1. Set 26½ ems pica wide by 6 inches deep.
2. Each contestant may enter two specimens.
3. Composer must make up his own copy. He is at liberty to add to the copy or omit portions, as he deems advisable, the object being to compile and set an ad. which will sell goods.
4. No illustrative cuts allowed. Material used to be limited to type, border, rule and such cuts and ornaments as are furnished by typefoundries in series or as parts of border and ornament fonts.
5. Two hundred printed slips of each ad. to be mailed to "O. F. Byxbee, 194 Fifth avenue, Chicago."
6. Use black ink on white paper, 6 by 8 inches exactly.
7. Write plainly or print name of compositor on one slip only, which should be enclosed in the package.
8. Each contestant must enclose 20 cents in stamps or coin to cover cost of mailing a complete set of specimens submitted. Canadian dimes may be used, but not Canadian stamps. If two designs are entered, no extra stamps will be required.
9. Each contestant will be given an opportunity to select the best three ads. A penalty of three points will be inflicted on leading contestants where a selection is not made.
10. All specimens must reach me on or before August 15, 1906.

The slip with the compositor's name and address and the stamps or coin should be enclosed in the package and not sent in a letter; in fact it is better not to write a letter at all. It is necessary to increase the cost of entering to 20 cents to cover the expense of postage and handling an ad. of larger size. The usual plan of designating the best ads. will be followed. A complete set of all the ads. submitted will be mailed to each competitor within a few days after the close of the contest, and the compositors themselves will act as judges, each being requested to select what in his judgment are the best three ads., and those receiving the largest number of points will be reproduced in THE INLAND PRINTER, together with the photographs and brief biographical sketches of the compositors who set them. Three points will be accorded each ad. selected for first place, two points for each second choice, and one point for each third. Contestants should read the rules very carefully and see that each provision is fully complied with, as failure to meet the conditions may debar their work. Special care should be taken to have the size of paper correct, as one ad. on paper too long or too wide would make every set inconvenient to handle, and such an ad. will be thrown out. Particular note should also be made of the date of closing, as ads. received too late can not be accepted. THE INLAND PRINTER is able to reproduce only a limited number of the ads. submitted, so that those who do not participate are missing much of the benefit to

SAN FRANCISCO, THURSDAY, APRIL 19, 1906

[illegible]

**MAYOR CONFERS  
WITH MILITARY  
AND CITIZENS**

AD.-SETTING CONTEST No. 20.—A slight departure for THE INLAND PRINTER'S twentieth ad.-setting contest will be made from the previous custom, inasmuch as the exact copy will not be furnished, but the contestants will be allowed to make up their own copy from the facts given. A number of requests for a contest of this character have been received, as it is contended that, particularly on weekly papers in the smaller towns, a compositor is not only expected to set the ad. but to write or at least suggest



a peculiar and sensational manner five miles south of the city. There was no telephone at the place and no particulars could be had. There was only one thing to do and that was to get there as quickly as possible. Within five minutes after the first tip was received our automobile, carrying two reporters, was on its way, and within an hour the story was being put in type. This record would have been impossible without the use of the auto, and at the time of day the tip was received any detailed report of the matter would have been out of the question for that day's issue.

"Another quick tip took the auto, two reporters and a photographer seven miles from town where two aged spinsters had lain down upon the railway track and met death locked in each other's arms. The coroner had been called and the tip sent to the *Telegraph*. The reporters

quick way of getting after the fellow and landing him in jail. A live newspaper is always looking for such opportunities, and as a consequence our reporters were with the officials in the automobile, and the man was landed behind the bars in quick time via the auto route.

"On still another occasion a bad wreck eight miles north of the city was tipped off to the papers. Our auto was soon on the way and reached the scene before the doctors arrived. A passenger train had run into a few freight cars which had been blown out of a siding on to the main track. The accident took place at a curve and was serious enough to produce good copy. On the back trip a relief train, which was returning to the city with the wounded, left the scene of the wreck at the same time as our automobile. It was a race of steam against gasoline with everything in favor of steam because of bad roads,



THE START AFTER BIG NEWS FROM THE OFFICE OF THE "TELEGRAPH" AND "JOURNAL."

were on the scene long before the coroner and abundant facts for a good story were collected. From the time of leaving the office until ready to return the time was not an hour. Just as the return trip had begun a sudden storm broke and the trip was one of the most severe tests an automobile has ever been put to in this part of the State. The rain came down in torrents, the wind blew a gale and there were four miles to be covered over mud roads before a pike could be reached. Worse still there was a mile stretch where a pike was being constructed and the workmen had scraped the road down to a slimy, slippery clay. The rain was so heavy that it was impossible to see more than a car length ahead and there was only the regular protection for the carburetor and cell box. But the trip was made successfully, as most trips with a good car are. The reporters' note-books were soaked through and there was not a dry thread of clothing in the crowd. The story, however, was worth the hardships it cost, as there were sensational features and a bit of pathos which made abundant material for a human interest tale.

"On another occasion a wild man was running amuck in the northern part of the country and officials wanted a

and yet the automobile was standing in front of the office and part of the story was in type before the passengers on the relief train had reached the city. And this, too, in spite of bad roads and the necessity of stops for teams. The train had no stops to make, was given a clear track and was urged by the needs of haste.

"One of the best bits of news gathering the automobile ever did was on the occasion of a partial destruction of the buildings at the county fair grounds by fire. The grounds are a mile and a half from the business part of the city. Our papers had headquarters there with telephone connection. Late in the afternoon of the big day this message flashed over the wire: 'The fair buildings are on fire, notify the department.' There was a buzz indicating further particulars and then silence. The connection was gone and no means of communication was left. The department was notified and a run for the grounds made. The auto beat the fire department and was on the scene within ten minutes after the first smoke was discovered. Ten thousand people were on the grounds and in the middle of an exciting horse race an exploding gasoline tank fired the grand stand, which was almost instantly a sheet of



flame. The fire spread rapidly until half the buildings were in flames, and frantic exhibitors ripped costly displays from the exhibit halls like so much junk or damaged wall-paper. The only exit from the grand stand was cut off by flames, and people leaped upon each other in a frantic effort to escape. We had four writers at work on the fire. Copy was produced on the grounds and the automobile carried it to the office, where it was put in type. Trip after trip was made, and in less than two hours the paper was on the street with six full columns of the story, one of the best beats of a year.

"At another time the buildings at the county infirmary, seven miles from the city, caught fire. The automobile squad started a few minutes behind an electric trolley car, which carried the officials of the county bound for the fire. The newspaper auto caught and passed the car, got the story, had it written, in type and printed while all the other people at the fire were anxiously waiting at the infirmary for a return trolley car to bring them back to the city.

"These are only a few of the many occasions when the automobile proved its excellence as a part of the news-gathering department, and there are few days when it is not on the go in some capacity. We would not be without our car for a great deal, as it is one of the hardest-worked members of a very energetic staff.

"There are a number of things to consider in the selection of a machine adapted for newspaper work. Our first purchase was made largely on the recommendation of others, as we had no experience. We bought a Rambler

ing capacity which will enable the carrying of several reporters and a photographer, with room to spare, and about all the speed that a good road makes it possible to use even though the impelling force is backed by the indomitable hustle of an aggressive newspaper. In this age of the automobile in business and pleasure the newspaper should lead. There are new victories for the paper with an auto, and an aggressive paper should not hesitate to get into the game while it still has that novelty, which will



C. R. YOUNG,

City Editor, Bucyrus (Ohio) Telegraph.

give the investment a double earning capacity through its advertising value and the real work which it will accomplish."

The *Telegraph* is a wide-awake daily, and the *Journal* is a weekly of similar enterprise. Photographs are shown herewith of J. R. Hopley, the manager, and C. R. Young, the city editor, of these papers, together with an illustration of the automobile ready for action.

#### BLEACHING CARDBOARD.

A customer, says an exchange, recently brought in a job sample that he wanted us to reproduce to a letter. We did not have the style of type used on the job, so sent the job to three photoengravers, who said they could not reproduce it, owing to the color of the cardboard, which was of a salmon tint. Then we set about to bleach the stock. Muriatic acid, diluted, will bleach many colors, but it would not touch this salmon tint. Finally we concluded to try hot-water baths, and after four immersions the card was almost snow white. We carefully dried and pressed the card, sending it to the photoengravers, who wanted to wager that it was not the same. This is a "trick" worth remembering, and will help please and hold your trade. It would have cost considerable more to set the job than the plate cost.

#### WE REGRET TO REPORT.

Assistant Editor—"I see here that an English general was badly cut in opening a wine bottle. What sort of a heading shall I put to it?"

Managing Editor—"O, just say 'Serious Accident to British Man of War in Attempting to Get Into Port.'"—*Tit-Bits*.



J. R. HOPLEY,

Manager Hopley Printing Company, Bucyrus, Ohio, publishers *Evening Telegraph* and *Bucyrus Journal*.

runabout, and though it was a stanch machine, it had insufficient power and carrying capacity for all kinds of weather and conditions. We decided to replace it with a larger car of the same make, and after a long experience with many demands for quick service, we feel that we selected wisely. We are now using what is called a Type One, and consider it especially good for newspaper work. It has a great capacity at a moderate cost, and plenty of power to negotiate any road, with ample reserve force for an extra-tough proposition. There is a seating and pull-





BY F. HORACE TEALL.

Workmen in every branch of the printing and allied trades are requested to file their names, addresses and qualifications on **THE INLAND PRINTER'S** list of available employees. Registration fee, \$1. Name remains on list and is sent to all inquirers for three months; privilege of renewal without further charge. Employers are invited to call upon us for competent help for any department. List furnished free. Specification blanks on request. Enclose stamp when inquiring for list of available employees. Address, **The Inland Printer Company, Chicago.**

The following list of books is given for the convenience of readers. Orders may be sent to The Inland Printer Company.

**PUNCTUATION.**—By John Wilson. For letter-writers, authors, printers, and correctors of the press. Cloth, \$1.

**PENS AND TYPES.**—By Benjamin Drew. A book of hints and helps for those who write, print, teach or learn. Cloth, \$1.25.

**BIGELOW'S HANDBOOK OF PUNCTUATION** gives full information regarding punctuation and other typographical matters. Cloth, 50 cents.

**ENGLISH COMPOUND WORDS AND PHRASES.**—By F. Horace Teall. A reference list, with statement of principles and rules. Cloth, \$2.50.

**PUNCTUATION.**—By F. Horace Teall. Rules have been reduced to the fewest possible, and useless theorizing carefully avoided. Cloth, \$1.

**COMPOUNDING OF ENGLISH WORDS.**—By F. Horace Teall. When and why joining or separation is preferable, with concise rules and alphabetical lists. Cloth, \$1.25.

**TYPOGRAPHIC STYLEBOOK.**—By W. B. McDermutt. A standard of uniformity of spelling, abbreviating, compounding, divisions, tabular work, use of figures, etc. Vest-pocket size. Leather, 76 pages, 50 cents.

**THE ORTHOEPIST.**—By Alfred Ayres. A pronouncing manual, containing about 4,500 words, including a considerable number of the names of foreign authors, artists, etc., that are often mispronounced. Revised and enlarged edition. Cloth, 18mo, \$1.34, postpaid.

**THE VERBALIST.**—By Alfred Ayres. A manual devoted to brief discussions of the right and wrong use of words, and to some other matters of interest to those who would speak and write with propriety. Includes a treatise on punctuation. Cloth, 4½ by 6½, \$1.32, postpaid.

**VEST-POCKET MANUAL OF PRINTING.**—A full and concise explanation of all the technical points in the printing trade, including chapters on punctuation, capitalization, style, marked proof, corrected proof, proofreaders' marks, make-up of a book, imposition of forms. Leather, 86 pages, 50 cents.

**ONE HUNDRED AND THIRTY-FIVE THOUSAND WORDS SPELLED AND PRONOUNCED.**—By John H. Bechtel, author of "Handbook of Pronunciation," "Synonyms," "Slips of Speech," etc. For practical needs of busy people and for quick reference this book will be found invaluable. 614 pages; cloth, \$2; leather, \$2.50, postpaid.

**PROOFREADING AND PUNCTUATION.**—By Adèle Millicent Smith. A manual of ready reference of the information necessary in ordinary proofreading, with chapters on preparing copy, reading proof, typefounding, sizes and styles of types, typesetting, jobwork, paper, technical terms, reproductive processes, etc. Cloth, 183 pages, \$1.

**CORRECT COMPOSITION.**—By Theodore Low De Vinne. Second volume of the series on "The Practice of Typography." A treatise on spelling, abbreviations, compounding, division, proper use of figures and numerals, italic and capital letters, notes, etc., with observations on punctuation and proof-reading. Cloth, 12mo, 476 pages, \$2.14.

**GRAMMAR WITHOUT A MASTER.**—By William Cobbett, carefully revised and annotated by Alfred Ayres. For the purpose of self-education this book is unrivaled. Those who studied grammar at school and failed to comprehend its principles, as well as those who have never studied grammar at all, will find it especially suited to their needs. Cloth, 4½ by 6½, \$1.07, postpaid.

**THE ART OF WRITING ENGLISH.**—By J. M. D. Meiklejohn, M. A. A manual for students, with chapters on paraphrasing, essay-writing, précis-writing, punctuation, etc. Analytical methods are ignored, and the student is not discouraged by a formidable array of rules and formulas, but is given free range among abundant examples of literary workmanship. The book abounds in such exercises as will impel the student to think while he is learning to write, and he soon learns to choose between the right and wrong in linguistic art and expression. Cloth, 12mo, \$1.50.

**VALUE OF A HYPHEN.**—A hardware catalogue had an item with the name "Automatic lock tackle block." Probably the people who buy such things know what this means; but does any one else know? Attention was called to it by the fact that one man did not know, for he singled out from it the term "lock tackle." There is nothing in it about a thing called a lock tackle. Maybe many others would recognize the true meaning as well as I do. Certainly I am not alone in being able sometimes to see through a millstone when there is a hole in it. But if one person can find in a name something so very different from the thing intended, may not others do likewise? The

thing named is a tackle-block with an automatic lock, and there is a way to show that unmistakably. In the form "automatic-lock tackle-block" a misreading would be simply impossible.

**REPEATED WORDS.**—Objection to frequent use of the same word has a natural limitation that is too often transcended in criticism. Sometimes such repetition has a strengthening effect that could be obtained in no other way. Professor J. P. Postgate, in the preface to Mrs. Cust's translation of Bréal's "Semantics," says: "This restlessness is absent in the ancient writers, to whom it never occurred to avoid a word on the sole ground that they had just made use of it." Of course this does not mean that any good writer ever encouraged a habit of useless repetition, or real tautology, of which the following is an example: "Only when a school board administrates its financial affairs along the same lines that the prosperous business firm or corporation does will the administration of the schools be most economically administered." Useful repetition is unobjectionable.

**WOULD BETTER.**—Samuel Johnson is said to have been the first to suggest that the idiom "had better" should be changed to "would better." At present each expression has many supporters, and opinions are uttered on both sides with extreme assurance, and without allowance for varying circumstance. One writer said, a few years ago: "No man with Anglo-Saxon instincts, or with red blood in his veins, is going to use 'would better' either in speaking or in writing. It is unhistorical, unidiomatic, and defies all logical analysis." On the contrary, the reason offered in its support is that it is grammatical—which means that it admits logical analysis—and that "had better" is ungrammatical. Professors Greenough and Kittredge, in their book "Words and their Ways," insist that "had better" is the truly grammatical expression. It is beyond question a fact that many persons with Anglo-Saxon instincts, and with red blood in their veins, do both say and write "would better," although it is equally a fact that it is unhistorical, unidiomatic, and defies logical analysis as a substitute for "had better" in the places where the latter is correct.

**NONCE-WORDS.**—A nonce-word is a word made for the occasion when it is used, and not likely to become established in general use. The Century Dictionary says they are numerous in English. In the Oxford English Dictionary, known also as Murray's, such words are recorded numerously, but even there the record is not exhaustive; so it may readily be seen that the subject can be considered here only in a very general way. Our reason for noting it at all is a practical one for proofreaders, many of whom think their failure to find a word in a dictionary is sufficient reason why that word should not be used. Some writers do use wrong words sometimes, and it is good for proofreaders to correct bad phraseology; but they should not forget that there is a limit to their duty and responsibility. The limit is not one that can be plainly defined, and must be left for the proofreaders themselves to determine according to circumstances. It seems well to remind them, however, that all good writers know pretty well how to use words and what words to use, and that it is not advisable for proofreaders to be too insistent in suggesting changes. The good writers, though, as a rule are more receptive of suggestion, and more willing to take all the real benefit from it, than poor ones are; but they are fully entitled to freedom of decision. When a suggestion has been clearly made and rejected, their decision should not again be questioned. A book entitled "Word-coinage," written by Leon Mead and published by

Thomas Y. Crowell & Co., is well worth a careful reading by every proofreader. Some things said in it are questionable, but in general it presents a very useful "brief study of literary style, slang, and provincialisms," besides an instructive "inquiry into recent neologisms," the quotations coming from its title-page. The second instance of what the author calls coinage is noted as follows: "Thomas Wentworth Higginson is not conscious of having produced more than one new word; that is the verb to densen. This was used in the form of the participle densening, in an essay called 'April Days,' appearing first in the *Atlantic Monthly*, April, 1861, and then reprinted in his 'Outdoor Papers' (1863), where the passage appears (p. 238): 'As the spring comes on and the densening outlines of the elm give daily a new design for a Grecian urn.' It seemed to him that there was previously no word to describe the steady filling out of the delicate outlines of an American elm in spring. He remembers writing an especial appeal to the proofreader of the *Atlantic*, who was strongly opposed to all verbal irregularities, and he [the reader] let the innovation pass. Colonel Higginson does not justify this act, nor is he inclined to think that he would now do such a thing, but it then seemed to him justifiable. He knows of no other author who has used the word, though his sentence is quoted as authority for it in the *Century Dictionary*." It should never have been necessary for Colonel Higginson to appeal to any proofreader for permission to use such a word, and his use of it was easily justifiable, on the ground of familiar analogy, as seen in thicken and widen. His word simply unites a well-known adjective and an equally well-known suffix of verbs, and their union into a word is just as reasonable as the expression of the same sense by a number of simple separate words would be. Mr. Mead's saying that the dictionary quotes the sentence as authority is in keeping with a common impression about such quotations in dictionaries, but it is not likely that the dictionary-makers thought of authority. The purpose of the quotation was merely to tell who used the word and how it was used. The sentence quoted, moreover, is not the one Mr. Mead cites, as one would naturally think it to be, but another printed in

*Harper's* in 1884. Colonel Higginson evidently repeated his "offense," because twenty years later he wrote, "In 1800 there is some densening of the population within the old lines." This is the sentence quoted not only in the *Century*, but also in the *Standard* and by Dr. Murray. The *Standard*, moreover, defines the word not only for Colonel Higginson's use, but so as to admit any and every possible use, regardless of the fact that it was not found elsewhere. All of which is good support for the assertion now to be made. Familiar word-elements are at the command of any person who chooses to put them together after the fashion of established words, regardless of

whether they have been so united before or not. For instance, any word like *emollient* may be taken as the source of one like *emollience*; *cigarless*, *bottleless*, *furnaceless*, or any possible similar word, is perfectly legitimate, whether it is given in a dictionary or not; and the mere support of analogy would be sufficient in many other cases. There was a first time for every word in this or any other language. Proofreaders are not at liberty to dictate to writers in such matters.

**HASTY CRITICISM.**—It is likely that nearly all the fault-finding criticism ever uttered is somewhat hasty and ill-considered, and it is sure that some of it is very much so. Nowhere is it easier to stray from rectitude in this respect than in criticizing language. A notable example of this was seen in looking over



"WHERE THE BELLS CHIME THE ANGELUS."

San Gabriel Mission, California.

some numbers of the magazine *Correct English*. An agent, soliciting subscriptions, sent to the editor a letter stating reasons why a gentleman would not subscribe. It and the editor's answer to it both showed lack of consideration, and the letter of objection showed actual ignorance posing as knowledge, as ignorance so often does. The letter accused the editor of making wrong uses of words, one item being this: "'Obtains' is incorrectly used in the sentence 'Note that the following rule obtains.'" The editor in answer quoted definitions from the *Century* and the *Standard* dictionaries, and then said: "Note in this connection that 'obtain' is recorded in these dictionaries as being strictly correct. The gentleman to whom you refer has probably arrived at his conclusion from a study of Webster, not knowing that the new diction-

aries have recorded this use of 'obtain' as correct." The objector made his assertion of incorrectness from pure ignorance, probably without consulting any dictionary, and the editor answered without sufficient reading. One was only a little worse than the other. The answer certainly meant that Webster's dictionary did not record the use of the word as correct, which is not true. Webster's definition for that use is just as plain and unequivocal as any other, and the proper answer to the objection would be that the word has been correctly so used for centuries and is so recorded in all dictionaries.

#### WHAT KILLED THE ACCENTED LETTER.

A valued correspondent objects to the omission by newspapers of the acute accent from the "e" in the first syllable of *débris*, the last syllable of *fiancé* and the first and last syllables of *résumé*, as well as other accents that indicate the pronunciation of a foreign word. *Attaché* without the accent on the last "e" shocks him, and all the more since it would be easy, it seems to him, to use the accented vowel in the copy and in the composing-room instead of the apparently silent "e." The omission of the French accents from these words is attributed to carelessness, and it is thought to suggest ignorance. The effect must be, it is thought, to debase the language, since many persons get all their education from the daily press. The pronunciation of the words cited can not but be corrupted, it is believed, by the omission of their proper accents. It is merely a question, the correspondent thinks, of inducing compositors "to use the right type."

It may be conceded that a faithful reproduction of the marks used in foreign countries to distinguish the various uses of letters, vowels and consonants, is in a general way desirable and is to some small extent practicable. But it is not so simple a matter as it looks. The Mergenthaler typesetting machines used at present in all up-to-date offices are not, as a rule, equipped for the reproduction of the accented letters of foreign languages. If the accent is used, it must be supplied by hand. This would involve loss of time and might mean failure to get out the paper at the hour required to catch the outgoing mails. Even fractions of a minute are sometimes vital in the composing-room. Readers might sometimes miss getting the news, owing to the compositor's difficulty in distinguishing the French silent "e," for example, from the "e" having the acute accent, the grave accent or the circumflex accent. German vowels have similarly discriminating marks, to say nothing of the accents on Greek vowels and the marks of quantity of Latin vowels. To note and observe these things invariably would be possible to a scholarly compositor with plenty of time on his hands, but in the rush of work on a morning newspaper it is virtually impracticable. In point of haste the daily newspaper has more required of it than the monthly magazine. Upon the whole, it has seemed expedient not to attempt extreme scrupulosity as respects accents, but to credit the reader with intelligence and education enough to supply them himself on occasion. As to some of the words cited, it may be held that the public is sufficiently familiar with them to pronounce them correctly without the guidance of marks.—*Baltimore Sun*.

#### PRESERVATIVE AGAINST RUST.

Iron may be preserved against rust by immersing it for a few minutes in a solution of blue vitriol; then in a solution of hyposulphite of soda, acidulated with chlorhydric acid. A blue-black coating is thus secured, which is not affected either by air or water.

#### LIGHT AND ENERGY.

Statistics showing the enormous waste of energy involved in the production of artificial light are always interesting, if for no other reason than they must continually stimulate inventors in the search for better methods. Sir James Dewar recently presented these figures before the Royal Institution of Great Britain: In an ordinary candle the total amount of energy transformed into light is only two per cent. Oil and gas lamps are not more economical. The incandescent electric lamp utilizes three per cent of the energy expended; the arc light ten per cent, and the magnesium light fifteen per cent. Then comes the glowworm and mocks us with its ninety-nine per cent of expended energy turned into light.—*The Keystone*.

#### STORY OF THREE BOYS.

Three boys were told to go and take the exact time by the town clock. The first came back and said: "It is twelve o'clock." He became in after life a bookseller. The second was more exact. He said it was three minutes after twelve. He became a doctor. The third looked at the clock,



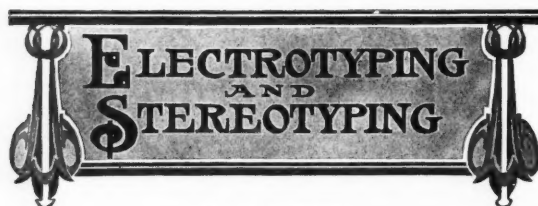
D. E. CUSICK, DANVILLE, ILLINOIS, AND HIS FILE OF INLAND PRINTERS.

found out how long it took him to walk back to the house, returned to the clock, then added the time of his walk to the time shown, and reported the result thus: "It is at this moment twelve hours ten minutes and fifteen seconds." That boy came to distinction as Helmholtz, the scientist."—*Modern Women*.

#### ONE OF THE FAITHFUL.

Twelve years of faithful study of *THE INLAND PRINTER* are represented by the accompanying picture. D. E. Cusick, Danville, Illinois, attributes his success as a printer to the ideas he has received from this publication.





BY C. S. PARTRIDGE.

Correspondence relating to this department is respectfully invited from electrotypers, stereotypers and others. Individual experiences in any way pertaining to the trade are solicited. Inquiries will receive prompt attention. Differences of opinion regarding answers given by the editor will receive respectful consideration. Address, The Inland Printer Company, Chicago.

Workmen in every branch of the printing and allied trades are requested to file their names, addresses and qualifications on THE INLAND PRINTER'S list of available employees. Registration fee, \$1. Name remains on list and is sent to all inquirers for three months; privilege of renewal without further charge. Employers are invited to call upon us for competent help for any department. List furnished free. Specification blanks on request. Enclose stamp when inquiring for list of available employees. Address, The Inland Printer Company, Chicago.

The following list of books is given for the convenience of readers. Orders may be sent to The Inland Printer Company.

REFERENCE HANDBOOK OF ELECTROTYPING AND STEREOTYPING.—By C. S. Partridge. In this work the author answers briefly the questions which arise from day to day in the practice of electrotyping and stereotyping. In the answers experience has been the teacher and practice the test of value. 134 pages. Price \$2.50. The Inland Printer Company.

ELECTROTYPING.—By C. S. Partridge. Its chapters include: Historical Review—The Battery—The Dynamo—The Bath—Steel, Brass and Nickel Baths—Management of Baths—Agitation of Baths—Measuring Instruments—Preparation of Work—Molding—Building—Metalizing—The Conductors—Depositing—Casting—Finishing—Trimming and Routing—Revising—Blocking—The Invention of Electrotyping. Full cloth; 150 pages. \$1.50.

STEREOTYPING.—By C. S. Partridge. This is the only book devoted exclusively to papier-maché stereotyping which has ever been published and is an exhaustive treatise of the subject, containing detailed descriptions of all the best methods of work in present use, including Cold Process, instructions for operating the Rolling Machine, Paste Recipes, Metal Formulae, Hints for the Protection of Type, Suggestions for the Operating and Care of Machinery, Instructions for Grinding Tools, and a complete list of unexpired patents pertaining to Stereotyping Methods and Machinery, including number of patent, date of issue and name of inventor. 140 pages, 6 by 8½ inches; 50 illustrations. \$1.50.

DEPOSITING SOLUTIONS.—O. O., New York city, inquires: "What is the average degree of solution for a 2½ horse-power dynamo? I am now depositing a case in four hours in 21-degree solution. What is the normal soda solution? What is the average measure of water, acid and blue-stone to make a depositing solution? Suppose we have a liter of water, how much sulphuric acid and blue-stone do we have to add to it to make a solution for 2½ horse-power dynamo? Kindly tell me what to do to make the shell of equal thickness all over, the same in the center as on the edges. Sometimes the muriatic acid does not seem to make its influence felt, and the lead does not combine with the shell. What can we do with that? Can you send us a piece of Congo paper? We do not find it here." Answer.—The "average degree of solution" most suitable for a 2½ horse-power dynamo is the same as is required for any other horse-power dynamo. The solution may be used somewhat richer with a high-tension current than with a low tension, but the current measured by horse-power does not signify anything; for instance, a 2½ horse-power might mean 2 volts and 900 amperes, or it might mean 10 volts and 180 amperes. The former voltage would be about right for electrotyping in series, while the latter would deposit the copper so rapidly that it would "burn." Your statement that you are now using a 21-degree solution is also of no significance, for while a 21-degree solution might be about right, it might also be entirely wrong, depending altogether on the proportions of acid and blue-stone employed. A 21-degree solution might mean 18 degrees of blue-stone and 3 degrees of acid, in which case it would be suitable for electrotyping with an agitated solu-

tion and a current of proper tension, or it might mean 14 degrees of blue-stone and 7 of acid, which would be unsuitable for any current. The depositing solution for electrotyping may vary to a considerable extent without affecting materially the quality of copper deposited, but measured by degrees it should register from 16 to 18 degrees of blue-stone and 2 to 4 degrees of acid. If the solution be agitated it will stand a larger percentage of acid than would otherwise be practicable. To make your shells of uniform thickness throughout, agitate your solution. If your backing metal does not stick to your shells it may be due, first, to the quality of your soldering acid; second, to inferior tin-foil; third, to the character of your solution, which may deposit the copper very hard, in which case it would be difficult to make the backing metal stick. In reply to your last question use litmus paper, which will answer the same purpose.

STEREOTYPING.—It is a curious fact that the popular method of duplicating printing forms in England is by stereotyping, whereas in America ninety-nine per cent of the same class of work is electrotyping. In recent conversation with a prominent English printer it developed that one reason for the unpopularity of electrotypes is their high cost and another is found in the delay in getting plates. It is probably true that electrotypes are cheaper in America, and that our methods of manufacturing are as a rule much quicker, but there is another reason which has a greater bearing on the question, and that is the superiority of English stereotypes. In America there has been little effort made to improve the quality of stereotypes, possibly because of the limited demand for them, and the bulk of our stereotyping is still done by the old papier-maché, hot-press method. There are some exceptions, for there are two or three "cold-process" methods which we employ to a limited extent, but for some reason they do not become popular. In England, on the other hand, stereotyping has been brought to a high state of efficiency and examples of work done by several different methods used in that country are difficult to distinguish from the results obtained from electrotypes. The Dalziel process perhaps ranks highest of the numerous modern methods of stereotyping, but there are several others which show extremely creditable results in the reproduction of half-tones as well as letterpress work. In all cases the improvement consists in coating the surface of the flong with a paste or cement which covers the fiber of the paper and gives a wax-like surface to the matrix. The chief objection to this process is found in the fact that such molds are not very durable and in most cases not more than one cast may be obtained. In some cases, however, it is claimed that the mold will stand several casts, and no doubt improvements will continue to be made along this line. It is quite the common practice in England to nickel-plate the stereotypes, thus improving their quality and increasing their durability. The materials used for coating the flongs are secret preparations and are sold under various names, such as: pulchre paste, ivorite, nickello, electroline paste, etc. In some cases the prepared material may be purchased from the inventors and in others a license to use the invention is sold with the paste. There would seem to be a field for stereotypes of this character in America, but it would no doubt be somewhat difficult to overcome the prejudice of American printers and convince them that any other process is "just as good" as electrotyping.

MATRICES BLISTER.—W. W. writes: "I do a little stereotyping from matrix (all flat work) sent by advertisers. Some matrices in appearance before casting are all right, but after I have done the casting the cuts are full



of dents, caused by the matrix that has blistered either by lack of pressure in making or they have been put in a damp place before sending to us. I heat the matrix and cast a dummy plate before casting. I would like to have you enlighten me in regard to this matter." *Answer.*—The defect in the matrices is no doubt due to the fact that they have become damp in shipping. Paper absorbs moisture very rapidly and drying them again will not remedy the trouble except where they can be placed back on the form and dried under pressure.

## OBITUARY

WILLIAM H. PAGE.

At noon Tuesday William H. Page passed away suddenly at his home on High street, in Mystic. He had been ill but a few hours. His age was seventy-seven years. Mr. Page was born in Tilton, New Hampshire, March 14, 1829. He was the son of James Page and was one of several children. At the age of fourteen he crossed the river into Bradford, Vermont, to learn the printer's trade. He spent two years there and one at Newbury, the next town above on the river, and one year at Haverhill, on the New Hampshire side. He next went to Concord, where he was employed a while, and next to Boston, and thence to Worcester, where he worked on the *Spy* for three years. He also worked on the New York *Tribune* during the Pierce campaign in 1852, after which he came to Norwich, Connecticut, where he worked on the *Norwich Tribune* at the time when Edmund Clarence Stedman was editor of the paper. Mr. Page spent two years on that paper. He had also mastered wood engraving. In 1855 Mr. Page went to South Windham with John G. Cooley, and engaged in the manufacture of wood type. In September, 1856, in company with James Bassett he started a wood type business in South Windham, and bought the machinery of a plant in Willimantic that was owned by H. & J. Bill. In the fall of 1857 the firm wanted more room, and removed to Norwich, and located in the upper floors of a big building in Greenville occupied in part by the Mowry Axle & Machine Company. At the end of several years Mr. Bassett retired and was succeeded by Samuel Mowry. The business prospered greatly under the guidance of Mr. Page. He made wonderful improvements in the machinery, and in fact revolutionized the making of wood type. His type was of the finest grade and it went to all parts of the known world. Mr. Page made the designs for the type and borders and was a master of every detail of the same business. He turned out letters that could be printed in different colors.

Later the plant was removed to the building recently occupied by the Thames Arms Company and afterward to the building now occupied by the Page Boiler Company, on Franklin street. After making wood type for more than thirty years, with success, Mr. Page sold the business to the Hamilton Manufacturing Company, of Two Rivers, Wisconsin, and the work is still carried on there with success.

Mr. Page's talent was not confined to wood type. He painted landscapes and portraits with success, and his pictures adorn many homes. Quite a number are in his native town. He owned hothouses and cultivated fruit and flowers at one time for the pleasure it gave him. He had

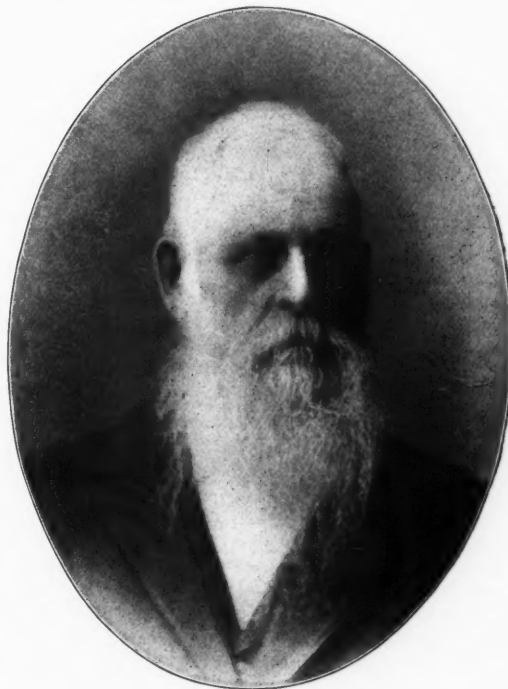
owned a modern milk farm on Hamilton avenue, on the East Side.

About twenty-five years ago Mr. Page became deeply interested in steam heaters and perfected several on new lines that are still in use. At one time one style was made by the Page Steam Heater Company in Greenville. Mr. Page in company with S. T. Dauchy, of New York, started the industry on Franklin street now known as the Page Boiler Company, which makes boilers Mr. Page invented.

Several years ago Mr. Page organized a company to make boilers of a new design in Plainfield. They are now being made on a royalty in the West. About two years ago he went to Mystic and was about to start a business for the manufacture of his boilers there, when his end came.

In Scotland in this State on November 20, 1855, Mr. Page was married to Catherine Elizabeth Hovey, a sister of Henry Hovey of Cliff street. Eight children were born of this union, three of whom are now living: Helen I. Page, a teacher in the schools of New London; William E. Page, of Mystic, and Louis H. Page, who lived in Mount Vernon, New York. Mr. Page leaves a sister, Mrs. William B. Hovey, in New London.

Mr. Page did not belong to any organizations. His habits were perfect and he possessed a most amiable dispo-



WILLIAM H. PAGE.

sition that made friends of all whom he met. He has given employment to hundreds of people and always took a fatherly interest in his help. He was generous and extremely charitable. As a general thing others than the deceased profited by his skill and talent. Still he did not complain and persevered to the end. His home life was happy. Mr. Page's many friends were surprised and grieved to hear of his sudden death, and know that the world is better on account of the example of his life.

The body will be brought to this city, and the funeral will take place Friday afternoon from the home of Mr. Henry Hovey at 3 o'clock.—From "The Record," Norwich, Connecticut, May 9.



BY JOHN E. CASHION.

This department receives frequent requests for half-tone overlays and progressive sheets for three-color work. In the future **THE INLAND PRINTER** will supply cut overlays of suitable subjects at a nominal cost for the time consumed in preparing such work. Pressmen who are anxious to apply specimens to actual work in hand should forward cuts by mail or express. Explanations and answers to inquiries will be sent with all specimens. The work is in charge of an expert who understands and appreciates the different requirements of various subjects.

Workmen in every branch of the printing and allied trades are requested to file their names, addresses and qualifications on **THE INLAND PRINTER'S** list of available employees. Registration fee, \$1. Name remains on list and is sent to all inquirers for three months; privilege of renewal without further charge. Employers are invited to call upon us for competent help for any department. List furnished free. Specification blanks on request. Enclose stamp when inquiring for list of available employees. Address, **The Inland Printer Company, Chicago.**

The following list of books is given for the convenience of readers. Orders may be sent to **The Inland Printer Company.**

**PHOTOTRICHROMATIC PRINTING.**—See Process Engraving.

**PRESSWORK.**—By William J. Kelly. A manual of practice for printing-pressmen and pressroom apprentices. New enlarged edition. Cloth, \$1.50.

**THE HARMONIZER.**—By John F. Earhart, author of "The Color Printer." A book of great value to any printer who prints on tinted or colored stock. Cloth, \$3.50.

**TYMPAN GAUGE SQUARE.**—A handy device for instantly setting the gauge pins on a job press. Saves time and trouble. Made of transparent celluloid. Postpaid, 25 cents.

**THE THEORY OF OVERLAYS.**—By C. H. Cochrane. A practical treatise on the correct method of making ready half-tone cuts and forms of any kind for cylinder presses. Revised edition, 25 cents.

**OVERLAY KNIFE.**—Flexible, with a keen edge, enabling the operator to divide a thin sheet of paper very delicately. Blade runs full length of handle, which can be cut away as knife is used. 25 cents.

**THE STONEMAN.**—By C. W. Lee. Latest and most complete handbook on imposition; with full list of diagrams and schemes for hand and machine folds. Convenient pocket size. 155 pages, \$1 postpaid.

**PRACTICAL GUIDE TO EMBOSING.**—By James P. Burbank. Contains instructions for embossing by the various methods applicable to ordinary job presses, and much information not hitherto accessible. 75 cents.

**A CONCISE MANUAL OF PLATEN PRESSWORK.**—By F. W. Thomas. A thoroughly practical treatise covering all the details of platen presswork, for the novice as well as the experienced pressman. All the troubles met in practice and the way to overcome them are clearly explained. 32 pages. Price, 25 cents.

**BRIGHT GLOSS RED.**—B. A. B., Albert Lea, Minnesota, writes: "I am having trouble with a job in which red has to be printed on dark cover-paper. The result desired is a bright gloss red. Can you tell me how to do this?" *Answer.*—You have used the wrong grade of red ink for dark cover-stock, it being a transparent color which allows the dark stock to show through, turning the shade of red to brown. Special ink is necessary for dark colored stocks, and it should be specified when ordering inks to be run on stock of this kind. Order what is known as cover red and run it as heavy as possible. It is seldom necessary to reduce these inks, as they should be heavy in body, with very little varnish in their make-up.

**A CRITICISM.**—The W. C. Company, Jamestown, New York, writes: "We enclose herewith a copy of the *Aristo Eagle* for criticism. Kindly note the effects of the half-tones, also the gray appearance of same. We would like you to tell us what should be done to get better results and your frank opinion as to the trouble, whether it is the ink used, or if the fault lies in the half-tone cuts, or the finish of the paper. We do not slipsheet this job and are very anxious to avoid this if possible." *Answer.*—On carefully examining the half-tones throughout the magazine little

fault can be found with the quality of the work. It is carefully and neatly done and the color is even. The book as a whole is above the average for work of this kind. By slipsheeting the job a little more color could have been carried on the half-tones, which would have improved the appearance somewhat.

**NEAT SPECIMENS.**—From Hurst Brothers, Stockport, England, is sent a number of neat specimens of presswork, the work of Mr. H. Gardner, pressroom foreman. Among these are several handsome specimens of three-color printing that compare favorably with the work done in America. The delicacy of the vignetting shown in most of the illustrations is also admirable in point of accuracy and toning.

**PRINTING VIGNETTED CUTS.**—F. B. R., Nashua, New Hampshire, writes: "We expect a job for an engine company of half-tone vignetted cuts, to be worked on a 90-pound coated book, black ink. We want to make a handsome job of it—have guaranteed to do so and are going to 'or bust,' as a large amount of first-class work will be ours if this job proves satisfactory, work which has heretofore gone out of the State. It is intended to work the job referred to on a four-roller cylinder press. Packing on cylinder now is three pressboards, muslin for make-ready and draw-sheet. Will you please suggest packing for best results for three to five thousand runs, and detail as to make-ready, cutting overlays, etc., and anything which may occur to you which might be of assistance to us. We have done some very creditable (so considered by many competent printers and users of printed matter) half-tone work, but our experience on vignetted work has been somewhat limited." *Answer.*—The amount of packing required for cylinder presses depends largely upon the depth the cylinder has been cut. Usually one pressboard and a sheet of manila are sufficient for the permanent packing, and about eight sheets of book paper of medium weight and a draw-sheet complete the temporary packing. At no time should the tympan extend above the cylinder bearers more than one sheet of book paper, except when running extremely heavy forms which test the strength of the press, and when extra packing is necessary it is best to place a part of the extra amount beneath the form. The make-ready on vignetted cuts is the same as when running square half-tones, except for a slight blending of the edges, which is obtained by a careful manipulation of the overlays. It is first essential that these cuts should be the correct height before starting the mark-out overlay, as any attempt to run vignetted cuts at various heights will prove disastrous. It is also important that the cuts lie firmly on the bed of the press with no rock or spring. When cuts are low, they should be brought up flat to the proper height. Quite frequently half-tones appear hollow in the center, especially vignetted cuts. In such cases a slight pyramid of folio should be made and placed between the plate and block. Do not try to get overlay effects by underlaying, and only use such material as is necessary to maintain the height desired. A three-ply cut overlay is most generally used for half-tones, both vignetted and square cuts being treated in the same manner; that is, as to detail, etc. These should be made of hard book paper, 25 by 38—60 pounds to the ream. In addition to the cut overlay, it is necessary of course to bring up the weak parts by means of a carefully constructed mark-up sheet. Avoid too much general impression on vignetted cuts, only placing the pressure where it is most needed. The four rollers should be adjusted properly on this class of printing. Any dipping of the rollers, if they do not revolve in the proper manner or they are set too low, will cause thick edges.

**IMPRESSION SCREWS ON JOB PRESS.**—H. V. C., Portland, Oregon, writes: "Is it proper to adjust the impression screws on a Gordon press for each job, or should the press be leveled and the impression screws remain untouched?" *Answer.*—When the impression screws are once set, they should remain untouched, unless an exceptionally heavy form is to be run, when they may be raised to avoid the use of too much loose packing. It is not usual, nor is it intended that the impression screws should be adjusted to suit different forms.

**THE INCEPTION OF THE HALF-TONE.**—W. H. M., Cleveland, Ohio, writes: "Will you kindly tell me how long the half-tone has been used successfully for commercial work? Also, how long has it been used for newspaper illustrating?" *Answer.*—Meisenbach patented his process in 1882 and is generally considered the real inventor and pioneer of the practical commercial half-tone. Max Levy further improved the process by producing screens on his engraving machine. The first successful attempt to make use of half-tones for newspaper illustrations is claimed by the New York Tribune in 1897.

**TO PRINT ON ALUMINUM.**—J. H. L., Racine, Wisconsin, writes: "Can you inform us of a satisfactory way to print on aluminum? Is the make-ready the same as when running other work? Also what kind of ink is best for work of this kind?" *Answer.*—There should be little difficulty in securing a good print on aluminum from either half-tone or type matter. The make-ready is the same as for other high-grade printing. A medium strong impression is necessary to secure the best results. What is known as a fine grade of quick drying job ink, costing about \$2 per pound, is most suitable for work of this nature. It is the drying quality of the ink that is necessary when printing on metal or other hard-surfaced material, as there is no absorbing power in finished metallic sheets. Allow the work to dry at least forty-eight hours before handling.

**ADJUSTMENT OF THE INTERMEDIATE GEAR.**—While the adjustment of the cylinder to bearers is of first importance in obtaining a perfect impression, other essential parts which it becomes the pressman's duty to regulate are the drop guides, sheet bands, grippers and the intermediate gear. The intermediate driving-gear should be set to run in close mesh with the cylinder-gear and driving-gear when the cylinder is down on the impression. To set the intermediate driving-gear, it is necessary first to remove the gear guards. Then move the press over on the impression and loosen the intermediate gear while the cylinder is down. This done, the pressman should stand in front of the gear and with both hands slide it in and out at various points on the impression. If the gear binds it should be reset. To do this, loosen the stud from the inside of the frame of the press and drive it out so that it may be turned easily, and then set the stud so that the gear can be slid off and on to the stud without binding the teeth at any point on the impression.

#### A FOOLOMETER.

Some visitors who were being shown over a pauper lunatic asylum inquired of their guide what method was employed to discover when the inmates were sufficiently recovered to leave.

"Well," replied he, "you see, it's this way. We have a big trough of water, and we turns on the tap. We leave it running, and tells 'em to bail out the water with pails until they've emptied the trough."

"How does that prove it?" asked one of the visitors.

"Well," said the guide, "them as ain't idiots turns off the tap." — *Harper's Weekly.*

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## QUESTION BOX

This department is designed to furnish information, when available, to inquirers on subjects not properly coming within the scope of the various technical departments of this magazine. The publication of these queries will undoubtedly lead to a closer understanding of conditions in the trade.

**PADDING GLUE.**—N. P. Co., Cincinnati, Ohio: "Can you kindly furnish us with the address of the Western Padding Glue Company?" *Answer.*—The Western Padding Glue Company is located at Quincy, Illinois.

**HALF-TONE PROVING PRESS.**—Edm. Gaillard, 30 Kreuzbergstrasse, Berlin, S.W. 47, asks for the address of the firm making the "H. & K." half-tone proof press shown in



the illustration herewith. Those interested will please communicate with Mr. Gaillard.

**CHALK-PLATE ENGRAVING.**—D. D., Greenville, Tennessee: "Can you tell us of a book on chalk-plate engraving and printing?" *Answer.*—The Hoke Engraving Plate Company, St. Louis, Missouri, can give you full information on the subject.

**CARDBOARD DISPLAY STANDS.**—M. C. S., Springfield, Massachusetts: "Who makes cardboard display stands, such as patent medicine people use for small articles to be attached to, the stands having a support in the back by means of which they are able to stand upright, or at an angle, and thus display the contents of the box or card?"



*Answer.*—The Story Finishing Company, 215 South Clinton street, Chicago.

**PAPER BALER.**—O. P. Co., New Philadelphia, Ohio: "Can you supply us with the address of a firm making paper balers, such as might be used in baling waste paper in a printing-office?" *Answer.*—The Famous Manufacturing Company, East Chicago, Indiana, manufactures such a device.

**ENGRAVED CARD PLATES.**—L. J. D., Thermopolis, Wyoming: "Can you furnish me with any information or books concerning printing engraved card plates?" *Answer.*—"The Art of Engraving," price \$1.50, contains information on this subject and is for sale by The Inland Printer Company.

**CLASSIFIED LISTS.**—T. A. & V. E. M. Co., Jackson Center, Ohio: "Can you furnish us with a list of the job-printing offices and publishers (not the small newspaper offices)?" *Answer.*—Boyd's City Dispatch, 16 Beekman street, New York city, is prepared to furnish classified lists of any kind.

**TRANSPARENT SHEET CELLULOID.**—F. R. M., Atchison, Kansas: "Can you inform me where I can obtain transparent celluloid in sheets for manufacturing hotel menu cardholders, etc.?" *Answer.*—The Celluloid Company, Newark, New Jersey, or B. F. Blodgett & Co., Leominster, Massachusetts.

**WOODEN HANDLES FOR FANS.**—C. H. T., Topeka, Kansas: "Please inform me where I can purchase the wooden handles that are used on cardboard advertising fans." *Answer.*—North-Western Novelty Company, Geneva, Illinois, or American Manufacturing Concern, Jamestown, New York, can supply you.

**STEREOSCOPIC VIEWS.**—N. L. R., Loudonville, Ohio: "Can you give me the address of some firm that makes cheap stereoscopic views? I want to use them for advertising purposes. I am informed they can be had for from 45 to 60 cents per hundred." *Answer.*—The Metropolitan Syndicate Press, Chicago, Illinois, can supply you.

**COLD PADDING GLUE.**—J. W. G., Indianapolis, Indiana: "Will you kindly give me the address of a manufacturer of a padding glue that is made for application without the necessity of heating?" *Answer.*—The Arabol Manufacturing Company, 100 William street, New York, and The Colloidin Manufacturing Company, 100 William street, New York, manufacture these goods, as well as all kinds of gums and sizes.

**DECALCOMANIAS.**—C. P., Hampton, Virginia: "Under heading 'Specialty Printing,' page 854 of March issue, the subject of 'Decalcomania' is explained. I am interested in this line of goods and would esteem it a favor if you will kindly furnish me the addresses of manufacturers." *Answer.*—The Meyercord Company, Chicago, manufactures decalcomania transfers and will be able to give you full information on the subject.

**ADVERTISING FANS AND NOVELTIES.**—W. B., Gibson City, Illinois: "Will you please give us the names and addresses of dealers in advertising fans and novelties for the trade?" *Answer.*—The Crescent Embossing Company, Plainfield, New Jersey, manufactures advertising fans, and the North-Western Novelty Company, Geneva, Illinois, and the American Manufacturing Concern, Jamestown, New York, can supply you with advertising novelties of any kind.

**DUPLICATE FORM COUNTER SALESBOOKS AND CARBONIZED PAPER.**—H. S. L. & Co., Albuquerque, New Mexico: "Can you give us the address of the printing firms who make a specialty of manufacturing counter salesbooks made in

duplicate form, which are being used in all retail stores? We would also like to know where we can get carbonized paper like sample enclosed." *Answer.*—The Chicago Sales Book Company, 16 North Desplaines street, Chicago, manufactures salesbooks of all kinds, and the General Manifold Company, eighth floor, Railway Exchange building, Chicago, can supply you with carbonized paper.

**IMITATION TYPEWRITER LETTERS.**—L. & A., Philadelphia, Pennsylvania: "Will you please inform us where we can buy a process for printing typewriter letters so that when names are filled in on the machine they will match the body of printed letter; or where we can buy a reliable ink and ribbon outfit that will match? If your firm publishes any book on the subject please send us literature and price so we can get it." *Answer.*—THE INLAND PRINTER for September, 1905, on page 828, contained an article on this subject. M. M. Rothschild, 96 Fifth avenue, Chicago, or the Neidich Process Company, Burlington, New Jersey, can supply you.

**"ROUGHING."**—E. C. A., Leadville, Colorado: "Some time ago I saw in THE INLAND PRINTER how 'roughing' was done after printing, etc., but I do not recollect whether it said a special machine was necessary or not, or that it could be done on an ordinary press with sandpaper. Kindly enlighten me." *Answer.*—Roughing may be done on an ordinary press by using sandpaper mounted on a block. However, a perfect result can only be obtained by having the stock run through a special roughing machine. The Henry O. Shepard Company is prepared to do work of this nature and will quote you prices upon receipt of inquiry.

**FORMULA FOR CHALK PLATES.**—A. W. B., Portland, Oregon: "Will you kindly give me the formula you published at one time for the manufacture of chalk-plate engravings?" *Answer.*—Dissolve pure gum arabic in warm water until it is the consistency of mucilage. To every teaspoonful of precipitated chalk add one teaspoonful of the gum arabic solution. Add water and stir until the whole becomes a thin emulsion. Remove the rust from the base plates with emery paper. Blue these plates on a hot fire and while the plates are still warm pour on the chalk emulsion. Bake slowly in an oven until the water is all evaporated. The upper crust will crack and can be peeled off, when the chalk surface can be scraped smooth. If the coating proves too hard, there is too little chalk. If too soft, there is not enough mucilage.

**PAPER.**—N. S. C., Richmond, Virginia: "Can you give me any information in regard to the meaning of S. C. and S. & S. C. m. f. coated and plate paper? Have you any book explaining the kinds and sizes of paper and how to tell them?" *Answer.*—S. C. means "sized and calendered," and S. & S. C. means "sized and supercalendered," referring to the finish of paper. Supercalendered paper has a smoother finish than plain calendered paper. You can only tell the kinds of paper by experience in handling it. There are so many kinds and sizes of paper and so many manufacturers that it would be impossible to obtain a book containing the information you seek. You can only obtain the desired information by writing to a number of paper manufacturers concerning their special output. The J. W. Butler Paper Company publishes a book on the subject called "The Story of Paper Making."

**READY-PRINT MAGAZINES.**—In answering a query to this department in the May number as to those who put out ready-print magazines, the name of the Associated Press was given instead of the American Press Association. A letter of protest from the Associated Press reveals the result-bringing value of THE INLAND PRINTER columns:



"In your May issue, on page 265, in answer to a correspondent, you say that 'the Associated Press can give information as to ready-print short story magazines.' You have evidently confused the Associated Press with the American Press Association, or some kindred organization, as we certainly know nothing about furnishing matter for ready-print magazines. As a result, we have received a large number of inquiries and it has caused us some inconvenience. Will you kindly see that the matter is corrected in your next issue." In this connection, we note that the Brooks Publishing Company, St. Louis, Missouri, makes a specialty of ready-print magazines.

**SHORT-WEIGHT PAPER.**—W. A. P., Jersey City, New Jersey: "Will you give me a little information regarding paper? For instance: I order fifty reams of cover-paper, 20 by 25—35 pounds, and the paper house bills it up 1,750 pounds at 6 cents. When the paper reaches me a number of the reams are weighed and I find they only average about thirty-two pounds each, yet I must pay for thirty-five-pound stock. I recently had occasion to order one hundred reams of twenty-pound folio and apparently every ream was from one-half to one pound short in weight. I have had similar experience with book papers, invariably finding them under weight. What I would like to know is who makes the extra profit, the paper mill or the paper house." *Answer.*—It is an old established rule in plain covers that they should run from one to three pounds under the nominal weight, and the selling prices are based on this rule. If sold at actual weight, the price per pound would be higher, and paperdealers make no secret of this custom. In other than plain covers, the rule is to run them full weight, which means that at times they will overrun slightly in weight and at times slightly under, for, as you are probably aware, it is impossible to run paper exact in this respect.



Example of commercial illustration submitted by Charles Helme Loomis, Advertising Manager, The Liquid Carbonic Company.

### VERSES ON MECHANISMS.

Rudyard Kipling proved by "McPherson's Hymn" that out of so prosaic a theme as a steam engine good poetry could be inspired. The Linotype, also, has been the theme of poets, and one of the latest metrical descriptions of its wonders comes from the Southern Publishing Association of Nashville, Tennessee. The bard, an apprentice in the Linotype department, "handles his feet," as an Irish friend says, on the model of Mr. Silas Wegg, and also does a little fudging in diction to make things fit, but here is his effort, "by request":

#### THE LINOTYPE SOLILOQUY.

Quietly sitting in his easy chair,  
Scanning the "copy" before him there,  
Working the keyboard with rapid pace,  
Reclines the operator with happy face.

Watch the matrices as they fall,  
Hurry, skurry, one and all;  
Dropping swiftly, one by one,  
Chasing each other as they run.

Down into the assembler-box below,  
Then up to the transfer slide they go.  
Into the first elevator they jump,  
Held in check by the compressed air pump.

Downward, downward, into the vise,  
And then are adjusted just so nice;  
And while they're held tightly in their places  
The pot comes forward and burns their faces.

Then three-fourths of a turn the disk goes round  
Until a certain place it's found,  
Then comes forth a "slug" quite hot  
Which was so recently in the melting pot.

This thing that holds the "slugs" in front,  
By the way, is a "stick" in a way not blunt;  
When this "stick" gets full of these "slugs" so queer,  
They are emptied on the table behind you here.

When the "cast" is made in the molding-room  
A rising position the "mats." assume;  
Until the very top they reach,  
Then are transferred across the breach.

And then an arm so long, so grand,  
Receives the "mats." in its groovy hand;  
(Another small arm comes out apace  
And carries the spacebands back in place.)

Now then begins their rapid flight;  
This time they reach a dizzy height,  
But they don't mind as they go,  
Because they're nearing home you know.

Now into the distribution-box they race,  
And up to the "sentry" with eager face;  
Each ready to give the "countersign,"  
For without it they can't pass that line.

A scene most cruel is next in line,  
As on the rod they cling like a vine,  
Hanging by their ears, a thing so mean,  
'Til they drop into the magazine.

### BEST IN THE COUNTRY.

Enclosed you will find postoffice money order for \$3 for another year's subscription to the best printer's journal in the country. Success to you and the noble art you are trying to uplift.—*John Bertelson, LaMoure, North Dakota.*

### QUALIFIED HIM FOR A POSITION.

THE INLAND PRINTER is the only magazine that helped me to qualify myself for the position I now hold in this office. Success to you.—*E. E. Brockmann, Steger, Illinois.*

### THE ARTISTIC ELEMENT IN MASKING PHOTOGRAPHIC PRINTS.



IN order to demonstrate what a remarkable effect the form and area of a mask have on the visual impression, it will only be necessary to compare the photographic views shown.

Fig. 1 is a full plate print, of square shape, which has a good balance between the different distances of the subject, and the masses as to area are also well selected. Fig. 2 shows a narrow and long elliptical mask, placed horizontally, that accentuates the declivity of the hill in the background, throws the clump of trees on the right into prominence and subdues the restless water of the foreground. The entire scene is pervaded with a sense of stately calmness.

Fig. 3 shows a larger ellipse placed vertically. This accentuates the foreground, removes the side mass of Fig. 2 and throws the tall trees into a spectral weirdness that is entirely absent in Fig. 1 or Fig. 2.

Fig. 4 is a shorter and wider ellipse, also placed vertically. The contrast between this and Fig. 3 is quite pronounced, because the length of all the vertical elements of the subject, notably the trees, bears a reduced relation to the length of the ellipse. There is also a certain feeling of repose not seen in any of the other views.

Fig. 5 is made with an elliptical mask having its greatest length parallel to Figs. 3 and 4. This ellipse is shorter than Fig. 4 and its width is reduced considerably more than the relative reduction of their lengths, consequently the spectral coldness, reinforcing the snowy hillsides, is increased and the loss of a considerable part of the foreground produces the impression that the subject as a whole is not of such an elevation as is Fig. 3.



FIG. 1.

Fig. 6 is an oval of similar dimension to Fig. 4, but in the last figure it is placed horizontally. This disposition reduces the foreground, accentuates the shaded mass on the right in contrast to Fig. 2 and startlingly reduces the distance to the hill crest of the background, thus controlling not only the balancing of the masses but modifying the effects of "distance."

The proper balancing of the light and shade masses in relation to the mask areas bears an important relation to



FIG. 2.

the artistic feeling of the reproduction, and the placing of elongated masks, either vertically or horizontally, modifies the sense of height of the vertical elements, while the roundness has much to do in softening angularities of the composition.

### A GERMAN VIEW OF OUR APPRENTICESHIP SYSTEM.

In a recent report to this Government, United States Consular Clerk Murphy, of Frankfort, Germany, writes as follows:

"As the opinion of a competent and disinterested foreign expert is always of interest, the following condensation of a lecture recently delivered before the Technical Club in Frankfort by Director Back, of the Frankfort Industrial School, may prove suggestive and of practical value. Mr. Back was one of the commissioners sent by the German Government last summer to visit the St. Louis Exposition and to gather material for a report concerning industrial conditions in the United States. According to Director Back, the subject of training industrial and technical apprentices does not receive in the United States the same general and widespread attention as in Germany:

"In America a young man has much less opportunity than in Germany to learn in a practical way all the details of a trade, and thus to become a skilled workman in a thorough sense of the term. This is largely due to a difference of systems, the general tendency in the United States being to reduce prices by almost entirely substituting machinery for hand work, by using a limited number of designs, and by manufacturing in immense quantities. Consequently a workman usually becomes familiar with only one of the many details of manufacture and seldom has an opportunity to follow an article through all the different processes required for its completion. Moreover, there is little occasion for hand work except in connection with repairs.

"Nevertheless it is always necessary to have a few trained workmen to attend to the final adjustment of parts and to put the finishing touches to a completed product. The scarcity of such skilled workmen is now being complained of more and more in the United States.



FIG. 3.

tices. This training is done, if at all, principally in small towns or in the country. Consequently the United States is now unable to supply its own demand for skilled laborers, the best trained men being largely immigrants from Europe, and especially from Germany.

"As this scarcity is at last being recognized as a weak point in the industrial development of the United States, efforts of various kinds are now being made to provide means for increasing the number of apprentices and for instructing them and other young men in a manner which will prove later on advantageous both to them and to the manufacturing interests of the country. A well-known firm in Philadelphia, for instance, now accepts three classes of apprentices, who are paid according to the quality of their preparatory education, and who, after they have

"Most owners of small establishments which still employ hand workers, especially those in the large cities, are unwilling to take the trouble and assume the responsibility of training appren-

been systematically and thoroughly trained, are given regular and profitable employment. There have been established also, especially in the Eastern States, a number of good industrial schools, where young people of both sexes are instructed in various kinds of useful hand work."

#### TECHNICAL SCHOOL FOR ITALIAN PRINTERS.

The Turin Typographical School was founded about three years ago, and to-day is an assured success, writes a correspondent of the *Master Printer* (Philadelphia). It is truly remarkable that in the first two years nine-tenths of the pupils have presented themselves for examination. This splendid result is mainly due to the intelligence of the management, and also to the teachers, who, with singular success, have inspired the scholars with affection for the school and love for study. This emulation among the scholars has been a power-



FIG. 4.

ful incentive, by which great results have been obtained.

For the student compositors the management has had compiled and published a little manual of grammar specially intended to furnish them with the most indispensable notions of literary correctness. It is divided into three parts, dealing with orthography, and treating of the correct presentation of words by graphic signs, according to their etymology, and dealing also with punctuation; the text part is grammar properly so called, and the formation of the Italian language; and the third part closes with an appendix formed of the alphabet of the Greek language, signs of punctuation, accents, etc., and shows the young typographer how to acquire the graphic forms of the Greek alphabet and to read quickly the words.

This interesting little manual, printed in the office of the school, forms an excellent example of good composition and clear working, and is dedicated to the Italian Professional Schools.

THE aspirations of the mind are the mold of character.



FIG. 5.



FIG. 6.





"SOME OF OUR FACES," a booklet issued by the Dry Goods Reporter Press, Chicago, shows in an attractive manner the type at the disposal of their advertisers. The booklet is printed in black and red, and each page is set in a different series.

THE advertising literature of Corday & Gross, Cleveland, Ohio, always attracts attention. This time it is a booklet entitled "Interesting," and the appearance and text uphold the name in every sense of the word. The following quotation sums up the argument: "Every dollar you put into making a piece of printing must carry something for brains."

THE Grand Trunk Railway System probably has issued the most sumptuous, tasteful and complete souvenir time-tables and descriptive brochures of any of the many admirable productions of late years in the way of railway



literature. The tour of Prince Arthur of Connaught through the provinces of Ontario and Quebec in April was the occasion which produced one of these souvenirs of the itinerary. The cover is lithographed on a rich-toned paper in gold, blue and red, the design being the British arms, the text of the book is printed in a strong sepia on toned paper, and

the many illustrations are exquisitely done in color. The cover-design is reproduced, showing the general design.

ONE of the most artistic specimens of printers' advertising of recent issue is a booklet from the Griffith-Stillings Press, Boston, Massachusetts. It is entitled "The Philosophy of Peter the Printer," and deals in an entertaining manner with the reasons why Peter lost the town printing. The cover, a reproduction of which is shown herewith, is printed in a very delicate blue tint on white stock, and embossed. The body of the booklet is printed on white



wove deckle-edge Advertisers' Text, every other two pages being blank, with the heads uncut. The frontispiece is in two printings from a wash-drawing and the text is illustrated with etchings from pen drawings. The whole is beautifully printed in delicate colors and forms a handsome piece of advertising literature.

A COPY of *Wezätas*, the house organ of Wald. Zachrissons, Gothenburg, Sweden, shows interesting typography and specimens of careful letterpress printing and lithography.

A UNIQUE bit of advertising is used by the Pirsch Press, Dayton, Ohio, in the shape of a "morning prayer," which is accompanied by an illustration and printed in text in black, red and green on salmon-tinted stock, the whole being mounted on a sheet of cover-paper.

THE March issue of "Crocker Quality," published by H. S. Crocker Company, San Francisco, California, is an artistic piece of advertising literature. This number, which completes the first year of publication, is decorated, in accordance with the month, with shamrocks, a border of these encircling each page, with a handsome design on the cover. The booklet, as the decoration suggests, is printed in black and green on India tint stock. As proof of the pulling quality of this kind of publicity the announcement is made that the booklet will be continued monthly.



UNIQUE and original is a mailing device used by August Petryl & Co., Chicago, a reproduction of which is shown. The original is printed in green, gray, yellow and black on India tint stock. At the bottom is attached a private post-card, which is separated from the design by a perforating rule.



THE following is from a unique folder issued by Marquam & Co., Decatur, Illinois: "Do you know that good printing conveys an idea of success? We may never see the man himself. It's his letter-head, his business card, his circular or his catalogue. We size the man up by that. You wouldn't say a man was successful if he sent you a business letter on wrapping paper—now would you? How do you suppose your correspondents are impressed by your stationery? We have

been successful because we have given a style and distinction to our printing that the ordinary man didn't have the talent or inclination to give. We have cut out for ourselves an individuality—a style. You have the same thing; you have individuality. It sticks out; when a person hears something you have said, he says: 'That sounds like Brown.' It's the same way with your printing. Does it impress with a distinction, a style? If not, interview the Marquam Press." The folder contains well-printed samples of commercial stationery on various grades of paper, with the prices for each grade. It is an attractive advertisement.

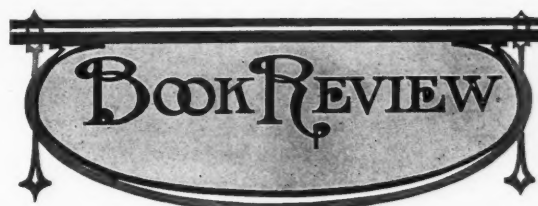
A POPULAR field for the development of ideas is the one covered by the announcement of early closing on Saturdays. This is not confined as an advertisement for printers to



the announcements which they themselves use, many firms giving these signs to customers with their imprint thereon. A unique specimen of this sort is shown herewith, being the announcement of Schwebke & Knerr, New York. The original is printed in black, brown and blue on cream-colored stock, and presents an attractive appearance.

#### A COMFORTABLE PROPOSITION.

I would not be without your magazine for a month any more than I would be without an overcoat in zero weather. It is O. K.—A. E. Gibson, Dorchester, Massachusetts.



"WITH NATURE IN COLORADO," a very attractive pamphlet, is the first of the season's offerings describing and picturing the beauties of mountainous Colorado. It is being distributed by the passenger department of the Denver & Rio Grande Railroad.

FUNK & WAGNALLS COMPANY, New York and London, have issued another of Miss Holley's popular books: "Samantha vs. Josiah," the story of a borrowed automobile and what came of it. 12mo, cloth, 400 pages. Comic illustrations by Bart Haley. \$1.50.

"THE PHANTOM OF THE POLES," by William S. Reed, published by the Walter S. Rockey Company, New York, has for its purpose an attempt to prove that there are no poles either north or south, but holes—for the earth is hollow, containing oceans, vast continents, mountains, rivers and vegetation. The work is freely illustrated and its price is \$1.50.

FROM Samuel D. Williams, secretary of the Chamber of Commerce, incorporated, of Newport, England, we have received the "Newport Year Book," the compilation of the secretary, and printed by the Williams Press, Limited, Newport-on-Usk. As a compilation the work shows evidence of thoroughness. The numerous maps and illustrations of the varied resources of Newport atone somewhat for the antiquated typography and jumbled appearance of the work, due largely to the vast amount of advertising matter.

"THE SELLING MAGAZINE."—Mr. Emerson P. Harris, with the month of May, issues No. 1, Volume 1, of the *Selling Magazine*, devoted to the marketing of machinery, tools, equipment and supplies. The publisher states that the *Selling Magazine* represents the first organized and systematic effort to do for the sales and publicity forces of machinery, tool, equipment and supply houses what the best trade and technical journals are doing for the manufacturing departments of such concerns, in order that the methods of the former may be reduced to something like the scientific economical basis of the latter. The *Selling Magazine* will deal largely with facts and figures—costs and results—and will present each month the best available information as to the selling methods of successful houses in the lines it appeals to. The price is \$1 a year, single copies 10 cents. The magazine is very neatly produced, full of interesting matter, and has a good advertising patronage in the initial number. Address Postal Telegraph building, New York.

SIGMUND GOTTLIEB'S "PRACTICAL TREATISE ON PHOTOGRAVURE."—Wilhelm Knapp of Halle a-Salle, Germany, publishes this work as the fifty-third volume of his exhaustive treatise, the "Encyclopedia of Photography." There are fifty-five pages of text and twelve illustrations. After giving a brief résumé of the advantages of photogravure or "Heliogravure," in its relation to tonal interpretation, the author treats, in a very comprehensive manner, of the practical and theoretical difficulties that are involved in operating the process. He successively considers the negative; retouching the negative; the positive; carbon tissue; sensitizing, printing and developing the image; dusting the ground on the copper plate; the etching; first proofs and

methods of retouching the plates; how to polish, engrave, scrape, burnish and roulette the plates. The method of steel facing of copper plates is described in detail, as to voltage, amperes, etc., and the composition of the electrolyte. The best method of printing, as to style of press, manner of placing the plates on the press, inks, paper, and the proper conditions of paper moisture, etc., are successively treated of. The volume ends by describing the use of photogravure plates on power presses and the adaptability of the process to combination effects through multiple impressions, with chromolithography, as well as the possibility of doing three-color work by this method. The book, 5½ by 8½, in paper covers, written in German. Price, \$1. The Inland Printer Company, Chicago.

"CHROMOLITHOGRAPHY," published by Wilhelm Knapp, of Halle a-Salle, Germany. This eminently practical handbook, published in serial form, has now reached its seventh number. The text is illustrated with examples of various classes of work, including three-color and other up-to-date processes. The series is to be completed in ten numbers at \$1 each. The entire lithographic art is the gainer by reason of the thorough exposition found in pages of the succeeding numbers, and individual workers will find the detailed treatise of the various stages of chromolithography of very great practical value. The adaptation of three-color principles to lithography is described at length; shading mediums, various kinds of grain, stipple, etc., are given prominence. Number 4 contains a beautiful three-color reproduction from an oil painting, original by "der Böhm. Graph. Aktien-Gesellschaft unie" of Prague. Number 5 specially treats of the interrelation of chromo and photo lithography, showing various examples of half-tone line drawing and the interference or moire effects of the screens when multiple plates and impressions are used, also the best forms of dot position to avoid "pattern" effects. Chromolithography and its coördination with collotype is also mentioned in this number, and inserts of Doctor Albert's tri-color reproductions made on this basis are given. Number 6 treats of the methods involved in the combined use of photogravure and chromolithography. In this number the first chapter of an exhaustive treatise is given, relating to the usual materials, etc., used in litho-color printing—the chemicals, papers, inks, bronzes, bronzing machines, presses, etc. A beautiful collotype insert is shown by J. Löwy of Vienna. An insert showing a chromolitho reproduction in still life of a vase of cosmos and some partially peeled lemons, in stipple grain, by Meissner & Buch, of Leipzig, sets a pace that three-color workers will have much to do to equal. Number 7 contains a treatise on the proper methods of preparing the litho stone, of preserving register, etc., also of reversing methods in their relation to multiple images, and the translation of white line into black line, etc., as well as the manner of enlarging and reducing by the usual devices. A "Photo-Algraphie," in half-tone screen insert shows, under a delicate tint, very good tone renderings. It is by Jos. Scholz, of Mainz. A second insert reproduced from a crayon sketch is quite effective. It is also by Mr. Scholz. The entire set will be a desirable acquisition to any one interested in either the practical or theoretical phases of the graphic arts. May be obtained through The Inland Printer Company, Chicago.

"THE BATTLES OF LABOR" (George W. Jacobs & Co., Philadelphia, Pennsylvania, price \$1) on the back of a modest cloth-bound volume suggests a flood of appeals to sentiment, many tugs at the heartstrings, and particular stress being laid on extenuating circumstances which seem to justify excesses. But the book before us is not

at all like the outgivings of the subscription-book publishers who produce a history every time there is a labor war which brings into prominence a "leader" who may be wheedled or seduced into allowing his name to be used as the author of a book with an inflammatory title about the world-old and never-ending strife of labor. This work is nothing of the kind. It is composed of four lectures delivered before the students of the Philadelphia Divinity School by "Carroll D. Wright, Ph.D., LL.D., former United States Commissioner of Labor, President of Clark College," and the author of several books on industrialism, to quote the title-page. The experience and temper of the author, as well as the character of his audience, are a guarantee of the reliability and freedom from "yellowness" of the lectures, and invitations to all desiring reliable information on a subject of ever-increasing interest. "The Background" is the title Doctor Wright gives his first lecture, and in it he covers the early struggles of the workers, vowing that the historians of antiquity have been negligent of labor and unfair when they spoke of it, because they were imbued with the idea that laborers were mere animals without souls and therefore deserving of no more attention than beasts of burden. Though cultured people no longer assume such a pose, there are many nowadays who—consciously or unconsciously—apparently act on that theory, and, in fact, it is openly expressed by not a few when they are defining the status of the negro. According to the author, trade unions are of great age and flourished in pagan countries, though "paganism ignored what we call the proletariat." The departure of the Hebrews from Egypt is seriously set down as a "great strike, having in it more of the elements of our modern battles of labor than most of those of ancient times," and there is sketched the long-continued agitation, the petitioning and appeals to modify the severe stints, which were ignored, all terminating in the appearance of the walking delegates Moses and Aaron, who resorted to mild boycotts and finally ordered the historic walkout of probably a million souls, whom the Egyptians vowed a turbulent crew they were glad to be rid of, but whom they tried to retain by all the arts in their power. Then we are treated to a glimpse of the bloody wars waged by labor and the wonderful influence of the unions until the advent of Jesus Christ. "The great master was himself of them," Doctor Wright tells the divinity students. "His youth was spent among them, and there are writers who do not hesitate to assert that He worked through labor organizations to bring the kingdom on earth. There is no positive evidence of this, but the analogies of His preaching and the tenets of the labor unions of His time surely indicate such a similarity that it is not a very great stretch of the imagination which leads to the conclusion that if not of them, He was with them in spirit and in action. He loved these working people beyond all others. \* \* \* He drew His disciples from them and recognized their needs as expressed in their struggles and aspirations." Among the most powerful of the unions at the beginning of the Christian era were those of the image-makers, and for purely economic reasons, they opposed Christianity because it had no place for idols. But the workers, like their fellows everywhere and in all ages, anxiously willing to accept any proposition looking to greater equality and better conditions, took to their hearts the new religion. Doctor Wright is a professing Christian and a leading light in his denomination, so he appears to be in an excellent position to give pertinent advice to those churchmen who are pondering on why the masses are estranged from the Church. Not less interesting to the average man is Chapter II—"In Medieval and Modern Industry"—which gives an inking

of the power of unions in the Middle Ages, the Wat Tyler rebellion—strike we would call it now—the influence labor agitation had in bringing about the Reformation, and early strikes in this country. The unions here labored under great legal burdens born of the English common law, but there were strikes for the ten-hour day, and men paraded under banners declaring that "From six to six" was their idea of a working day. This chapter concludes with statistics concerning American labor troubles down to 1880 and a presumably reliable sketch of the great railroad strike of 1877. Chapter III, "Great Modern Battles," is a résumé of the more important strikes since 1880, concerning which Doctor Wright is so well qualified to speak, it coming within the scope of his official duties to be informed as to their causes and effects. It is in the next and last chapter, "How Battles of Labor are Treated," that he makes deductions from historical research and his experience. From this well of information Doctor Wright draws words of wisdom for present-day industrialists.



SAN GABRIEL MISSION, CALIFORNIA.

The Doctor has, according to his critics, played many parts with much facility. He has been hailed with loud acclaim as the spokesman of labor, and denounced as its betrayer; the employer points to him as an all-sufficient justification for his (the employer's) position, and at the same meeting deplores the dissemination of such sentimentalism as Wright preaches. To those who have never regarded him as dishonest, all this blowing hot and cold tends to prove his honesty of purpose, adding much weight to his advice. He is not opposed to "government by injunction," against which the unions inveigh so fiercely, yet he believes the socialistic agitation is a distinct benefit to the people, because its trenchant criticism is bringing us to a realization of the faults and follies of the present system. The practical suggestions of such an acute observer and so broad-minded a man are worthy of more than the usual amount of consideration. Of all the talked-of amelioratives he pins his faith to the methods of conciliation and arbitration and shows conclusively that those who reject or spurn that method are not only standing in their own light, but promoting inexcusable waste and retarding the progress of the race. Those interested in the great question of the day should have the book on their shelves. Those who are not interested particularly ought to read it, for it not only sketches history, but depicts clearly the trend of events.

I AM a subscriber and constant reader of your valuable publication and have received many valuable lessons from its pages.—*L. B. Springsteen, Philadelphia, New York.*

## TRADE NOTES

THE Harris Automatic Press Company announces the appointment of Clarence W. Dickinson as Western sales agent, with offices at 317 Dearborn street, Chicago.

J. WILSON RAY, in charge of the printing machinery and supply departments of the Charles Beck Paper Company, Ltd., Philadelphia, Pennsylvania, is leaving for a visit to England and Scotland, making Glasgow, his native city, his first stopping place. Mr. Ray will return to the Quaker City about the middle of August.

THE Duplex Printing Press Company, in order to care for its extraordinary increase of business, has added seventy per cent of space to its capacious plant in Battle Creek. A magnificent suite of offices is also being added and many of the latest achievements in labor-saving automatic machines have been ordered for use in the enlarged plant.

MR. JOHN W. MARDER, who for the past seven years has been a resident of Palmyra, New York, where he has been engaged in the manufacture of the Cranston printing press, on May 1 became the owner of the property of the Peerless press works of that city, and has consolidated the two businesses. The Peerless company turns out six sizes of job presses and the Peerless Gem paper-cutter. The industry is one of the largest in Palmyra, and Cranston presses and Peerless jobbers and paper-cutters are shipped all over the civilized world. The consolidation will assist materially in the development of the business of both old concerns.

MR. ARTHUR WILSON is well known to thousands of persons connected with the printing art. As the representative of the Duplex Printing Press Company he has traveled in all parts of the world during the past fifteen years. Of late years Mr. Wilson has been Western representative for his company. Occasionally he has found time to send very interesting matter for publication in *THE INLAND PRINTER*. During the coming summer Mr. Wilson and his wife intend to travel in England and Scotland. They will avoid railways and other means of conveyance excepting feet and limbs.

Walking from place to place, it is expected they will learn much of the rural life of those countries. Mr. Wilson has promised to send *THE INLAND PRINTER* any information or photos of general interest to printers and no doubt he will find many such. He traveled to Capetown, South Africa, in 1896; to Manila, P. I., in 1902, on which trip he made a tour of the world, and to the Port of Spain, Trinidad, in 1903. Mr. Wilson has erected presses in nearly every State and territory and in most of the Canadian provinces. He started in the business as a printer's devil twenty years ago in Cincinnati and has helped considerably in bringing flat-bed perfecting presses to their high degree of proficiency.



ARTHUR WILSON.





Under this head will be briefly reviewed brochures, booklets and specimens of printing sent for criticism. Literature submitted for this purpose should be marked "For Criticism," and directed to The Inland Printer Company, Chicago.

Postage on packages containing specimens must be fully prepaid. Letters positively must not be included in packages of specimens, unless letter postage is placed on the entire package.

NOLAN BROS., Brooklyn, New York.—The card submitted is neat and shows a good use of color.

EDWIN I. BAER, Canton, Ohio.—The specimen submitted is neat and well printed, presenting an attractive hanger.

SPECIMENS from F. A. Wolfe, Augusta, Georgia, are original in design and show a discriminating use of color and ornamentation.

SPECIMENS from Charles B. Kline, with Lewis C. Le Naire & Co., New York, contain interesting type designs and are very creditable.

SPECIMENS from Samuel F. Kerr, Pittsburg, Pennsylvania, are neat in design, and the presswork and use of color show careful consideration.

NEAT, modest typographical design and a good use of color are features of the commercial specimens from Hal Osgood, Bradford, Pennsylvania.

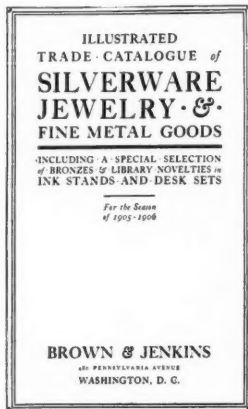
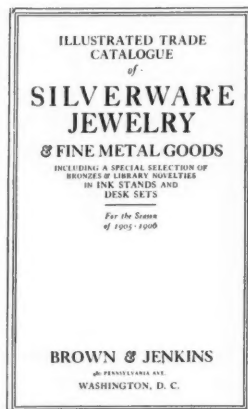
GEORGE C. L. SNYDER, Wrangell, Alaska.—Your letter-head would look better in smaller sizes of type. Avoid letter-spacing text as much as possible.

ARTISTIC type designs, good presswork and a careful use of color are characteristic features of the work of W. A. Woodis, Worcester, Massachusetts.

M. C. CONNOR, Sharon, Pennsylvania.—The circulars are both good specimens. The punctuation points after display lines are unnecessary, however.

R. LANARD NEAL, Marion, Indiana.—Your specimens show considerable improvement over former work. The club year-book page is especially attractive.

THE productions of D. Gustafson, Red Wing, Minnesota, are uniformly creditable. Reproductions are shown herewith of one of his pages, illustrating different treatments. Both of these contain many good features. On



the originals the two large lines and the firm name are in red, balance in black.

AN artistic program in black, red and light green has been received from W. Mitcham, Natal, South Africa. The typography and presswork show careful attention.

ATTRACTIVE specimens have reached this department from The Dugazou Press, New Orleans, Louisiana. Several unique designs are shown and the work is well handled.

A PACKAGE of commercial specimens from the Live Oak Publishing Company, Live Oak, Florida, contains neat, modest typography and harmonious color combinations.

"THE SCENIC LIMITED" is the title of a unique pamphlet issued by the Denver & Rio Grande Railroad to advertise its new daylight train through

the Rocky Mountains between Denver and Ogden. The printing is from the press of Carson-Harper, Denver.

SPECIMENS from J. Warren Lewis, Pasadena, California, contain exceptionally clever advertising designs and tasty composition. The booklets are especially worthy of notice.

STEVE LOWLEY, Gering, Nebraska.—The letter-head is original in design, but would have been much better in two colors, as the decoration is rather heavy for a one-color production.


W. C. TUNSTALL, Scranton, Pennsylvania.—The booklet is a great improvement over the majority of publications of this class, the cover being very unique and appropriate.

GEORGE W. SHIRLEY, Philadelphia, Pennsylvania.—Your specimens are neat and show, with the exception of the card, careful use of color. The heavy rule on the card throws the weight of color too low.

AN exceptionally artistic specimen is a booklet printed by the Binner-Wells Company for The House of Kuppenheimer. It is 11 by 14 inches in size and contains reproductions in colors of posters, street car advertisements and other literature used to advertise the Kuppenheimer clothes. The cover

## What Kuppenheimer Will Do for You

A true outline of Co-operative Advertising  
which the House of Kuppenheimer  
extends to all its Customers



**B. Kuppenheimer & Co.**  
Chicago      New York      Boston

is embossed in dark green and gold on light-brown stock, and the title-page, a reproduction of which is shown, is in black and orange, the type matter being in black. The typography and presswork leave nothing open to criticism.

MASON N. CASE, Corning, California.—Text letters do not lend themselves readily to letter-spacing, and where possible this should be avoided. Otherwise your letter-head is very attractive in appearance.

THOMAS PERRY, Atlanta, Georgia.—Smaller sizes of type should have been used on the bill-head, especially for the "M" preceding the line for the debtor's name. This line should have been much shorter.

OLIVER C. SCHOFIELD, Richmond, Virginia.—Your specimens show originality in design and a discriminating use of color and ornamentation. The letter-head and envelope for your own firm are especially commendable.

THE Schumann Art Print, South Norwalk, Connecticut.—The letter-head would be better without the ornament in the center panel or the borders in the end panels. They do not add anything to the job, but complicate it instead.

FROM the Peerless Printshop, Wyoming, Iowa, another package of high-class commercial stationery has been received. The typography, presswork, stock and treatment of color all combine to make the productions of this press unusually attractive.

A BOOKLET printed for the Morgan & Wright Co. by Hollister Brothers, Chicago, is a neat specimen. The cover is in three colors, embossed, while the body is in black over a tint on coated stock. The typography and presswork are beyond reproach.

THE Challenge Machinery Company, Grand Haven, Michigan, have issued a miniature catalogue of their machinery and supplies. It is for general



distribution, and covers their line thoroughly. There are twenty-four pages and cover, the body, which contains numerous half-tones, being printed in brown ink on white stock. The cover is in black and red on brown stock.

A. J. SIMMER, Sioux City, Iowa.—The cover submitted is original in design, but the use of the smaller size of text-letter in the last five lines leads to a rather confusing appearance. The use of old-style in this case would have been an improvement.

GRAY PRINTING COMPANY, Fostoria, Ohio.—Your specimens, with the exception of your own bill-head, are creditable and show much originality. The bill-head in question, however, is rather too ornamental and bizarre to be classed as good commercial stationery.

C. A. BOESSELL, Newkirk, Oklahoma.—There is just as much necessity for a period after the colors or the emblem as there is for one after the motto on the program. It is not needed in either place, but they should be consistent, no matter which style you choose.

D. C. SILVE, New Orleans, Louisiana.—With the exception of a tendency toward overornamentation, your specimens are very good. On your own letter-head the rules are too heavy for the type-faces. Running the rules in a lighter color would improve it very much.

W. H. COE, Grand Junction, Colorado.—Considering the amount of presswork involved, the letter-head is not what it should be. The use of a tint instead of the silver would have been an improvement, and would have saved an impression. The other specimens are much better.

THE Tribune Company, New Albany, Indiana.—The specimens submitted are very good and leave little to criticize. The comma after the firm name and the periods at each side of the address line on the envelope are unnecessary, however, and their omission would be an improvement.

GEORGE R. STOUT, Sumner, Illinois.—The placing of oval and rectangular cuts together on some of the pages is unfortunate and should have been avoided as far as possible. The separating of the name of the city from the name of the State on the cover-page, with the hyphens between them, is not good.

A. BERGSETH, Racine, Wisconsin.—The commercial specimens submitted are exceptionally well designed and executed. The program cover, however, is poorly displayed, the different groups of matter on the page being too nearly equal in attractiveness. The top group should have been given more prominence.

HENRY L. MURPHY, Fayetteville, North Carolina.—The envelope is less attractive in three printings than it would have been in two, with the omission of the ornament. Unusual improvement in appearance is necessary to justify the use of this sort of decoration on an envelope. The other specimens are good in type arrangement.

A REPRODUCTION is shown of an original and unique card. It was designed by Mr. Horace Cumming, Houston, Texas, and speaks well for his originality.



G. T. PARKHURST, Chelmsford, Massachusetts.—The program is very attractive and shows careful handling, with the exception of the running over of one word on the first page. The omission of the word "the" in the line above would have made this run-over unnecessary. On the bill-head the business is accorded too much prominence.

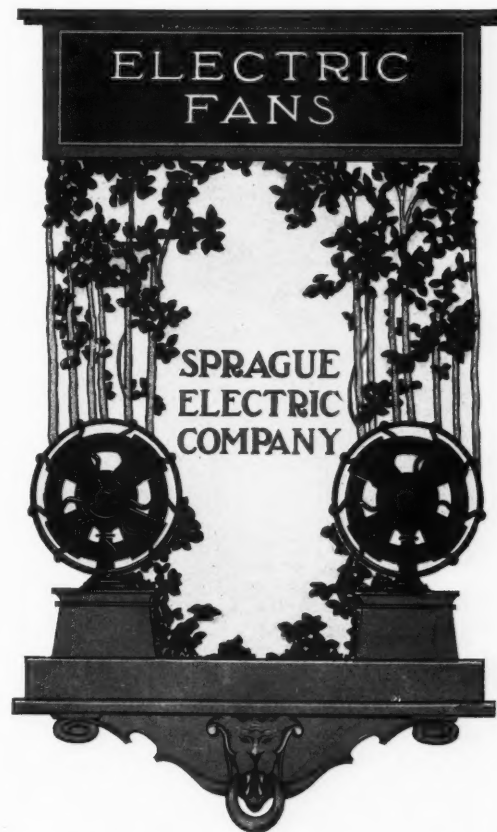
W. E. SPENCER, Clarendon, Arkansas.—The letter-head should have had a little more white space at the top, the dash should have been shorter, and the rule in the date line not longer than twelve picas. A twelve or eighteen point rule at the end of the date line is sufficient. The name of the firm is in rather large type for stationery of this class.

H. F. LAKE, JR., Gunnison, Colorado.—The letter-head of the Lone Pine Ranch shows an injudicious use of rules, both for underscoring and the making of panels. In using rules for underscoring, the weight of the rules as compared with the weight of the type-face should be taken into consideration, and they should harmonize in tone. On the letter-head in question a heavy gothic line is underscored by light rules, giving an

effect that is far from harmonious. Where light-faced rule is used for panels the presswork must be well done and the rule in good condition.

"EASTWARD THROUGH THE STORIED NORTHWEST" is the title of an attractive booklet issued by the Northern Pacific Railway. It deals in an interesting manner with a trip from California eastward over the Shasta-Northern Pacific Route and gives entertaining descriptions of the objects of interest en route. It is excellently illustrated with half-tones printed over tints.

A CATALOGUE of electric fans recently issued by the Sprague Electric Company is worthy of especial notice on account of its handsome cover, a reproduction of which is shown. The cover is in four printings—black,



blue, green and gold—on white pebbled stock, and the title-page is in black and a tint of blue on white coated stock. The balance of the catalogue, which contains numerous half-tones, is well printed in black and blue. The whole forms a most pleasing piece of work.

The Evening Telegram, St. John's, Newfoundland.—The type-face used on your bill-head is entirely too large and heavy for commercial stationery of this class. The initials do not harmonize with the type, being small and light in tone as compared with the balance of the line. The use of the same style of initial on the card gives a more pleasing effect as it is more in harmony with the type.

THE usual high standard of excellence of the productions of the Matthews-Northrup Company, Buffalo, New York, is maintained in the recent specimens. Among the most artistic of these are a booklet for Higgins & Seiter, New York city, with a delicately lettered cover embossed in gold on white stock, and a booklet for the Chicago Beach Hotel, the cover and title-page of which are especially appropriate.

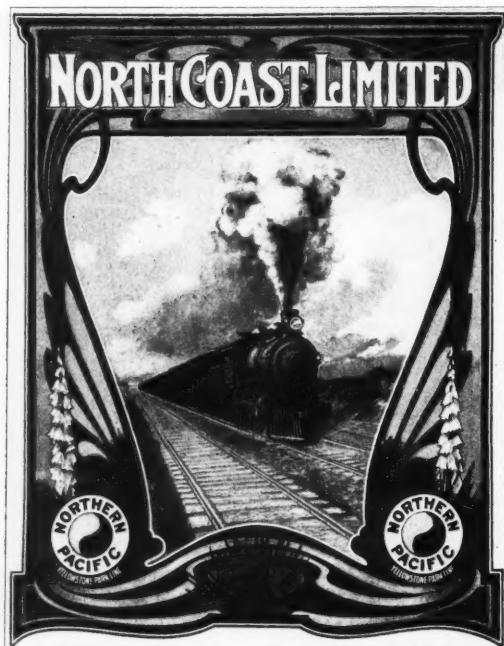
UNUSUALLY attractive are specimens from the School of Printing of the North End Union, Boston, Massachusetts. Chief among these is a booklet entitled "The Features of a Printed Book." It consists of forty-four pages and cover and shows examples of the typography of modern book pages, together with much technical information. It is well printed and shows careful typography.

OTTO MOORE, Texarkana, Arkansas.—While your specimens are, on the whole, very creditable, a few of them show a tendency toward an excess of ornamentation. The use of decorative effects on business stationery should be well considered and they should be in harmony with the style of the type-face used or have some relation to the business for which the stationery is intended. But the use of ornaments simply to "fill up,"

and that without regard to tone harmony, shape harmony or the appropriateness of the decoration, should be avoided.

"SUMMER EXCURSION ROUTES—1906" is the title of a comprehensive book of resort information issued by the Pennsylvania Railroad. It is from the press of Allen, Lane & Scott, Philadelphia, Pennsylvania, and is rather in advance of the work usually done in this class of advertising. Numerous half-tones show the attractions and beautiful scenery to be found on the lines and connections of the Pennsylvania Railroad.

An artistic booklet is the "North Coast Limited" a beautifully illustrated description of the North Coast Limited transcontinental service of the Northern Pacific Railway. The cover is in three colors, while the illustra-



tions are in black and the text in gray. It is the work of the Randall Printing Company, St. Paul, Minnesota. A reproduction of the cover is shown.

An interesting bit of printing is the program of the anniversary services of the printers' mass in New York city on May 6, 1906. The program contains a half-tone of St. Andrew's Church, in which on May 5, 1901, this early morning mass—the first ever celebrated for night workers—was instituted. Portraits of the pastor, archbishop and assistant priests are also shown. The cover is hand-lettered with illuminated initials.

NEW CENTURY PRINTING COMPANY, Lebanon, Pennsylvania.—The booklet contains many common faults. The use of heavy type and light-faced rules on the cover produces an appearance that is not harmonious. The weight of rules or ornamentation should be in keeping with the weight of the letter. Slightly heavier rules around the inside pages would have made a better showing on the hard, rough stock used. The spacing around the initial letter is very poorly handled.

A copy of volume I of "The Silver Standard" has reached this department and proves to be a unique publication. It is published by the International Silver Company, of Meriden, Connecticut, and is primarily a house organ. The fact that it is dated in 1847 and gotten up in the form of a newspaper of that period, with articles of national interest taken from publications of those days, shows, to quote the publishers, "A striving after typographical distinction; a searching for the interesting and curious; a stirring up of the mustiness of by-gone customs and opinions; a dabbling in the history of our country." It is an exceptionally interesting publication.

BLOTTERS have been received from the following firms: Manship & Boitz, Chicago; Frank McLees & Bros., New York; Rogers & Hall Co., Chicago; The Hillsboro Journal, Hillsboro, Illinois; Thompson Electric Works, Chicago; John T. Palmer Company, Philadelphia; The Caxton Company, Cleveland, Ohio; The F. H. McCulloch Printing Company, Austin, Minnesota; D. B. Landis, Lancaster, Pennsylvania; Joseph Dixon Crucible Company, Jersey City, New Jersey; Lincoln Freie Presse, Lincoln, Nebraska; J. W. Cass, Johnson City, Tennessee.

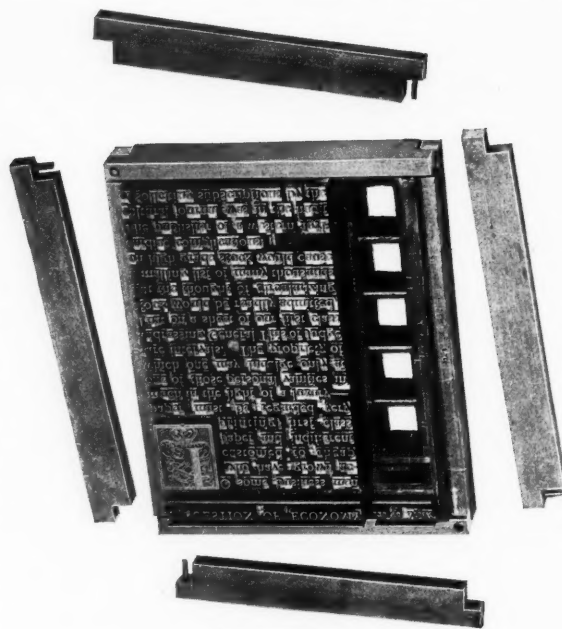


This department is exclusively for paid business announcements of advertisers, and for paid descriptions of articles, machinery and products recently introduced for the use of printers and the printing trades. Responsibility for all statements published hereunder rests upon the advertisers solely.

THE Springfield paper-ruling machine, built by E. J. Piper, Springfield, Massachusetts, is a well-constructed machine, having all the necessary mechanical appliances for producing accurate work rapidly. Mr. Piper entered the ruling-machine field in 1863, and the knowledge gained through this long experience enables him to turn out a machine which is satisfactorily the most exacting of present-day requirements.

#### THE END OF THE STRING.

Almost every book of instruction in the art of printing contains several pages on how to tie up a page of type—how to grasp the string, to begin a certain way and end at a certain corner, and how to tuck in the end to hold the page fast. Many writers have devoted columns in the technical press to the same subject, giving instruction on how to wind up and knot the string after use, etc. That



IDEAL STEEL TIE-UP.

the use of string in tying up pages is an abomination has long been recognized, but it seemed to be one of the necessary evils.

A practical device has just been invented which does away with the string nuisance and after thorough tests is found to be a wonderful time and money saver. Instead of tying string around the job or page, it is enclosed in a steel frame joined at each corner in such a way that the tie-up can be left around the type when the pages are

locked up for the press, saving the time of untying, and later the time of tying them up again, when the form is ready to be broken up. The "Ideal" Tie-up, as this furniture is called, consists of steel strips eighteen points in thickness made up in varying lengths to even picas, each piece being provided with a pin in one end and an enlarged hole in the other. All pieces are interchangeable, and the "play" at the corners allows for the squeeze of the lock-up. When a job tied up with the "Ideal" Tie-up is to be lifted to the galley for correction, the removal of one side piece unties the job in an instant, and the time saved rapidly pays for the cost of the material. Another important point in bookwork is the fact that pages can be fully

paper. It prints from flat forms and will deliver from ten to twelve thousand sheets an hour, printed on one side and numbered in another color on both sides, the sheets being counted and collated as delivered. This machine has been adopted by the largest printers of counter-check books in Great Britain and is giving perfect satisfaction. Further particulars may be had by writing to the Toronto Type Foundry Company, Limited, 70-72 York street, Toronto, Canada.

#### CHANGE OF FIRM.

The Andrews & Pittman Manufacturing Company has purchased the plant, good will, etc., of the J. W. Kent Machine Company and has added another partner to the concern. Andrews, Pittman & Marsh will be the title of the firm in the future, and it will build the well known Kent Power Paper-Cutters and Die-Cutting Presses, for which there is a steadily increasing demand, in addition to



LOCKED UP IN THE CHASE.

justified to exact lengths inside the steel enclosure, insuring perfect register and rendering unnecessary any justification on the stone.

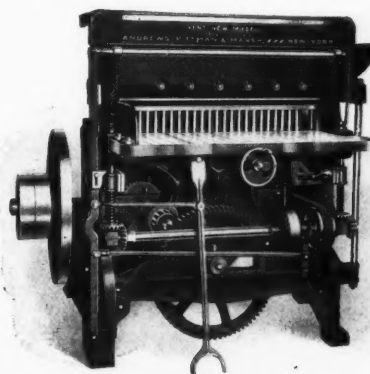
If the form is to be electrotyped, type-high bearers are placed around the sides of the page without removal of the tie-up, guaranteeing a plate free from that class of errors which occur when strings are removed in locking up for foundry.

Still another feature of the Ideal Tie-up is that it answers for use as steel furniture in blanking out pages, forms, etc., and in this connection it is equivalent to that of the ordinary kind now in use.

The Ideal Steel Tie-up seems to be one of the most practical labor-saving devices for the composing-room, and the readiness with which printing-houses are taking it up proves its economical advantages. John S. Thompson & Co., 130 Sherman street, Chicago, are the patentees and manufacturers.

#### THE WAITE COUNTER-CHECK BOOK MACHINE.

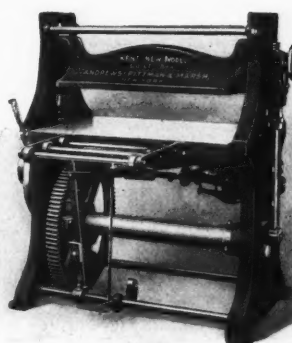
This machine, advertised on another page of this issue, will turn out the highest class of printing and is not limited to counter-check book work. It will print in a satisfactory manner anything that can be run from roll



KENT POWER PAPER-CUTTER.

its Ideal iron grooved blocks, register blocks, iron topped imposing tables, printers' supplies and general machine work.

This concern has made rapid strides in the trade since its inception four years ago, and has gained the confidence of the trade by fair dealing and uniform high grade, as well as advanced labor and time saving qualities of its various products.



KENT DIE-CUTTING PRESS.

The Kent Power Paper-Cutters, "the machines that have made good for thirty years," will be kept up to the high standard the firm has always maintained and several improvements have been added that will keep them in the front rank of high-grade power paper-cutters.

We predict a growing business for the Kent Paper and Die-Cutting Presses, that have held the reputation for



years of being the strongest and most accurate machines in their line.

Mr. Hamilton R. Marsh, the new member of the firm, is a novice in the paper-cutter line, but his extensive acquaintance and genial personality insure that he will be favorably heard from in the trade in the near future.

Messrs. Andrews & Pittman are already well known in the East and need no introduction from us, but we are sure that their past reputation for square dealing is sufficient guarantee to insure a prosperous business for the new concern. Their advertisement appears on another page of the present issue.

#### RULING AND PANTAGRAPH MACHINES.

Herewith is shown the plant of the John Hope Engraving and Manufacturing Company, Providence, Rhode Island, which makes a ruling machine and a pantagraph

cally new quick-change Linotype, known as Model No. 5. This machine marks a new era in the history of composing machines. If there were any objections in the offices of book and job printers to the Linotype, because a complete change of face could not be made quick enough to suit their several requirements, this new machine will certainly overcome all of them.

The new Linotype is of the standard model — that is, containing one magazine, but with this vast improvement: where formerly the magazine was lifted upward from the back of the machine, requiring the services of two men to make the change, and consuming some few moments, in the new machine the magazine lifts directly from the front, is less than the weight of the old magazine, and the entire change can be made by a boy. The mechanism has been made so simple that any boy in the office can be trained to make the change in a few moments.



PLANT OF THE JOHN HOPE ENGRAVING AND MANUFACTURING COMPANY.

machine, each the best in its class, for steel and copper plate and other engravers. This company began business in 1847 and the subsequent years have seen a marvelous growth in its business. Any one interested in engraving will do well to get in touch with this representative house, whose machines are superior to any others of the sort made abroad. This statement is amply substantiated by many concerns who have tried the machines. Write to-day for further particulars to John Hope & Sons, Engraving & Manufacturing Company, Providence, Rhode Island.

#### NEW MODEL 5 LINOTYPE MACHINE.

Following its policy in continuously improving and progressing, the Mergenthaler Linotype Company, of New York, announces in this month's advertisements a radi-

Another change which will be welcomed by printers is in the price of extra magazines, the new ones costing but \$100 each, where formerly they cost \$163 each. With the new machine practically every need of the book and job office can be taken care of, and corrections made in different faces in a startlingly short time.

There is also another advantage: As the magazine lifts from the front, the machine occupies less floor space, as it has been necessary to leave a certain amount of room in the rear of the machine that the magazines might be changed.

The advertisement of the Mergenthaler Linotype Company in this issue shows an illustration of the machine and a man removing the magazine. As the Linotype Company announces that it has full descriptive circulars ready, we would advise all printers to send for them.

## WANT ADVERTISEMENTS.

We will receive want advertisements for THE INLAND PRINTER at a price of 50 cents for 20 words or less, each additional 10 words or less 25 cents, for the "Situations Wanted" department; or 80 cents for 20 words or less, each additional 10 words or less 40 cents, under any of the other headings. Address to be counted. Price invariably the same whether one or more insertions are taken. **Cash must accompany the order to insure insertion in current number. The insertion of ads. received in Chicago later than the 18th of the month preceding publication not guaranteed.**

### BOOKS.

A POCKET COMPANION for Linotype operators and machinists; price, \$1. S. SANDISON, 318 W. 52d st., New York, N. Y.

COST OF PRINTING, by F. W. Baltes, presents a system of accounting which has been in successful operation for many years, is suitable for large or small printing-offices, and is a safeguard against errors, omissions or losses; its use makes it absolutely certain that no work can pass through the office without being charged, and its actual cost in all details shown; 74 pages, 6½ by 10 inches, cloth, \$1.50. THE INLAND PRINTER COMPANY, Chicago.

DRAWING FOR PRINTERS, a practical treatise on the art of designing and illustrating in connection with typography; containing complete instructions, fully illustrated, concerning the art of drawing, for the beginner as well as the more advanced student, by Ernest Knauff, Editor of *The Art Student*, and Director of the Chautauqua Society of Fine Arts; 240 pages, cloth, \$2 postpaid. THE INLAND PRINTER COMPANY, Chicago.

ELECTROTYPING, a practical treatise on the art of electrotyping by the latest known methods, containing the historical review of the subject, full description of the tools and machinery required, and complete instructions for operating an electrotyping plant, by C. S. Partridge, Editor of "Electrotyping and Stereotyping" department of THE INLAND PRINTER; 150 pages, cloth, \$1.50 postpaid. THE INLAND PRINTER COMPANY, Chicago.

HINTS ON IMPOSITION, a handbook for printers, by T. B. Williams. This book is a thoroughly reliable guide to the imposition of book forms, and shows, in addition to the usual diagrams, the folds of the sheet for each form, with concise instructions; several chapters are devoted to "making" the margins; 96 pages, 4 by 6 inches, full leather, flexible, gold side stamp, \$1. THE INLAND PRINTER COMPANY, Chicago.

PHOTOENGRAVING, by H. Jenkins, containing practical instructions for producing photoengraved plates in relief-line and half-tone, with chapters on dry-plate development and half-tone colorwork; no pains have been spared to make the work of utility, and all generalizing has been avoided; no theories have been advanced; profuse examples show the varied forms of engraving, the three-color process being very beautifully illustrated, with progressive proofs; silk cloth, gold embossed, revised edition, \$2. THE INLAND PRINTER COMPANY, Chicago.

PRACTICAL FACTS FOR PRINTERS, by Lee A. Riley; just what its name indicates; compiled by a practical man, and said to be the most practical little book ever offered to the trade; 50 cents. THE INLAND PRINTER COMPANY, Chicago.

PRACTICAL GUIDE TO EMBOSSEING, written by P. J. Lawlor, and published under the title "Embossing Made Easy;" we have had this book thoroughly revised and brought up to date, and added a chapter on cylinder press embossing; contains instructions for embossing by the various methods applicable to ordinary job presses, for making dies from various materials readily obtained by every printer; also for etching dies on zinc; there are cuts of the necessary tools, and a diagram showing the operation of the dies when put on the press; 75 cents. THE INLAND PRINTER COMPANY, Chicago.

PRESSWORK, a manual of practice for printing pressmen and pressroom apprentices, by William J. Kelly; the only complete and authentic work on the subject ever published; new and enlarged edition, containing much valuable information not in previous editions; full cloth, 140 pages, \$1.50. THE INLAND PRINTER COMPANY, Chicago.

"THE BOOSTER"—Has done untold good for us; sample copies 15 cents, or for 25 cents we will send "The Booster" and a half dozen "Business Bringers and Holders," such as we have used and found successful. DOERTY PRINTER, Findlay, Ohio.

THE RUBAIYAT OF MIRZA MEM'N, published by Henry Olendorf Shepard, Chicago, is modeled on the Rubaiyat of Omar Khayyam; the delicate imagery of Old Omar has been preserved in this modern Rubaiyat, and there are new gems that give it high place in the estimation of competent critics; as a gift-book nothing is more appropriate; the binding is superb, the text is artistically set on white plate paper, the illustrations are half-tones from original paintings, hand-tooled; size of book, 7¼ by 9¾, art vellum cloth, combination white and purple or full purple, \$1.50; edition de luxe, red or brown India ooze leather, \$4; pocket edition, 3 by 5½, 76 pages, bound in blue cloth, lettered in gold on front and back, complete in every way except the illustrations, with full explanatory notes and exhaustive index, 50 cents. THE INLAND PRINTER COMPANY, Chicago.

VEST-POCKET MANUAL OF PRINTING, a full and concise explanation of the technical points in the printing trade, for the use of the printer and his patrons; contains rules for punctuation and capitalization, style, marking proof, make-up of a book, sizes of books, sizes of the untrimmed leaf, number of words in a square inch, diagrams of imposition, and much other valuable information not always at hand when wanted; 50 cents. THE INLAND PRINTER COMPANY, Chicago.

### BUSINESS OPPORTUNITIES.

Letters in reply to these advertisements will be forwarded without extra charge. Specimens of work or advertising matter will not be forwarded unless necessary postage is sent us.

FOR SALE—Complete newspaper and job plant in excellent condition, publishing daily 1,600 circulation, weekly 2,500, in growing city of 12,000 population; doing between \$2,500 and \$3,000 of business per month and steadily increasing; in splendid field to improve. For particulars, price and terms write C. A. MCCOY, Lake Charles, La.

FOR SALE—Half interest in job office located in northern city of 75,000 for \$4,000; doing \$1,500 business a month. W. W. HUNTLEY, 913 Park Place, Duluth, Minn.

FOR SALE—Modern job plant, clearing \$2,500 a year; must sell; snap for quick buyer. E 367.

FOR SALE—Printing office doing \$800 good, clean business monthly; 6 presses, 4 motors, cutter, type, and cut cabinets, and a full line in up-to-date type-faces and body-type; price, \$2,250; terms. P. O. Box 312, Denver, Colo.

FOR SALE—\$300 cash, balance easy payments, buys a job bookbinder; cleared \$1,500 last year; good reasons for selling. G. W. WOODFORD, Carthage, Mo.

### Publishing.

CLASS JOURNAL FOUNDATION, established 28 years; is run down, but makes profit; great enhancement possible; physical assets about \$15,000; gross business \$15,000; price \$15,000 cash. HARRIS, 253 Broadway, New York.

### FOR SALE OR EXCHANGE.

Letters in reply to these advertisements will be forwarded without extra charge. Specimens of work or advertising matter will not be forwarded unless necessary postage is sent us.

A BEST MANUFACTURED STEREOTYPE PAPER, which is ready for use, for Cold or Hot Process; our Patent Front and Back Matrix Paper requires only Two Seconds to make ready and to beat or to press in; each matrix will cast a number of excellent plates; we mail 12 Front and 12 Back Matrix sheets for \$1; we also have the largest selection of Stereotype Machinery of latest improvements. F. SCHREINER MFG. CO., Plainfield, N. J.

BABCOCK No. 7, regular drum cylinder, prints 7-column quarto, back up, tapeless delivery, rack, screw and table distribution; been in use on a weekly paper less than two years, good as new; will sell for about half price; small cash payment, balance on time; no money required until press is running and proves satisfactory. SPIRIT PUBLISHING CO., Punxsutawney, Pa.

BABCOCK PONY DRUM No. 2 regular, bed 22 by 27, complete in every particular, absolutely as good as new; jobber, Thorpe Gordon, 10 by 15, throw-off, treadle, steam fixtures, roller stocks, chases, good condition, cheap; stitcher, Perfection No. 2 wire stitcher new and in first-class condition, a bargain. THE CATARACT JOURNAL CO., Niagara Falls, N. Y.

CYLINDER PRESSES CHEAP—One each: Hoe 2-revolution, 4-roller, air springs, table distribution, tapeless delivery, 4 tracks, box frame, side and overhead steam fixtures, complete, bed sizes, inside bearers, 32 by 47, 36 by 51, 38 by 55, 45 by 60; one Cottrell 2-revolution, 4-roller, bed 27 by 37, air springs, table distribution, front fly delivery, complete, side and overhead steam fixtures, trip, back-up; one Babcock pony drum, bed 27 by 38, 2 form rollers, air springs, rack and screw distribution, tapeless delivery, back-up, side and overhead steam fixtures; one Cottrell drum, bed 27 by 39, 2-roller, air springs, rack and screw distribution, tapeless delivery, box frame, side and overhead steam fixtures; all in first-class order; will be sold very cheap, on easy terms, f. o. b. cars. Address at once E. H. PALMER, 164 Federal st., Boston, Mass.

FOR SALE—A good weekly in Southern Minnesota; do not write unless you mean business. POST, Blue Earth, Minn.

FOR SALE—Cranston job cylinder press, 49½ by 23 bed, rack distribution, tapeless, back-up motion, wire springs, in first-class running condition; taken out to make room for an Optimus press; to be sold cheap. NEWS-DEMOCRAT PUBLISHING CO., Canton, Ohio.

FOR SALE—Two Cottrells 37 by 55, plate distribution, back delivery; one Campbell 22 by 28, plate distribution, front delivery. CADILLAC PRINTING CO., 97 Fort st., West, Detroit, Mich.

FOR SALE—Two 8-point Thorne machines in excellent condition, now in use, cheap; also 8 by 12 brass arm Gordon press and 29 by 43 Cranston drum with all improvements. REPUBLICAN, Columbus, Ind.

# Knife Grinders

Machines sent on thirty days' trial to responsible parties. If interested, write us. Complete Bladery outfits.

THE BLACKHALL MFG. CO., 12 Lock St., Buffalo, N. Y.

## SIMPLE—AUTOMATIC—GUARANTEED

Using Emery Wheels Arranged for Wet or Dry Grinding.

NOTE—Sizes given are for length of knife (not width of cutter).

Style E—To stand on bench. Dry grinding only. 26-in. \$50, 32-in. \$55, 38-in. \$60.  
Style A—With iron stand. Wet or dry grinding. 26-in. \$75, 32-in. \$85, 38-in. \$90, 44-in. \$100, 54-in. \$115, 60-in. \$150. With water attachment, \$10 extra.  
Style C—Extra heavy. Wet and dry grinding. 54-in. \$185, 60-in. \$185, 75-in. \$205, 90-in. \$225.

**FOR SALE OR EXCHANGE.**

Letters in reply to these advertisements will be forwarded without extra charge. Specimens of work or advertising matter will not be forwarded unless necessary postage is sent us.

**FOR SALE**—First-class medium sized complete job plant cheap; business good. Write R. H. TILNEY, Cripple Creek, Colo.

**RESIDENCE FOR SALE.**

**FOR SALE**—New frame cottage, 5 rooms and bath, lot 40 by 125, located in Fernwood on improved street, sewer, water and gas in; convenient trains from Polk street depot, Chicago, thirty-eight minutes; price, \$2,000—easy terms like rent; owner 1138 Monadnock bldg.

**HARRIS ROTARY PRESS**, large size, prints stock up to 15 by 18 inches, nominal running speed 6,500 impressions per hour, used but little and in first-class condition, for sale at a bargain and on reasonable terms. E 322.

**HELP WANTED.**

Letters in reply to these advertisements will be forwarded without extra charge. Specimens of work or advertising matter will not be forwarded unless necessary postage is sent us.

**ARE YOU LOOKING FOR WORK?** File your name with The Inland Printer Employment Exchange, and it will reach all employers seeking help in any department. Situations were secured during the past month for the following: Job printers, 14; Linotype operators, 7; Monotype operator, 1; Simplex operator, 1; machinist operators, 4; linotype machinist, 1; foremen, 6; all-round men, 5; bookbinders, 8; stonemen, 3; ad-men, 2; make-ups, 2; compositors, 6; artist, 1; pressmen, 14; proofreader, 1; editor, 1; stereotyper, 1. Registration fee, \$1; name remains on list until situation is secured; blanks sent on request. **THE INLAND PRINTER COMPANY**, Chicago.

**Composing-room.**

**FIRST-CLASS JOB COMPOSITORS**—Union, 8 hours, wages \$20 and upwards; send samples. F. W. BALTES & CO., Portland, Ore.

**Engravers.**

**WANTED**—Half-tone operator; also prover—one who is familiar with Golding art jobber; steady positions guaranteed to strictly first-class men. E 361.

**Foremen.**

**FIRST-CLASS JOB-PRINTER** who can take charge as working foreman; open shop, 53 hours; good wages for right man. E 385.

**FOREMAN** for composing-room; an experienced man. Write fully concerning ability, references, salary. F. P. BUSH, 412 W. Main st., Louisville, Ky.

**SUPERINTENDENT** printing plant in New York State with 5 cylinders and 7 jobbers; must be capable of taking entire charge, and of producing proper amount first-class work at minimum cost; state age, experience, references and salary expected. E 379.

**WANTED**—All-round man capable of earning \$21 per week to assist proprietor inside and do soliciting; job office doing high-grade work; open shop; Connecticut; splendid opportunity. E 368.

**WANTED**—Foreman of composing room, open shop, of 10 or 12 men, on job, blank book and fine catalogue work; state experience, age, and wages expected. E 176.

**WANTED**—Working foreman and assistant superintendent in high-class catalogue printing-house; volume of work, \$20,000 per month; must be modern methods and systematic, must be able to handle help, schedule work, forward it from one department to another, also O. K. forms for quality of work. E 363.

**Manager.**

**PRINTERS' ADVERTISING MAN** wants position; salary, 50 cents each business-bringing advertisement; send trial order. **CHARLES JOHNSTOWN CO.**, Ayer, Mass.

**WANTED**—An experienced and practical man to manage a job and newspaper plant, with a daily and weekly paper, doing an annual business of over \$25,000; desire the party able to buy an interest in and take full charge of the business. For particulars address E 262.

**Operators and Machinists.**

**AN EXPERT LINOTYPE OPERATOR-MACHINIST**, with long factory experience, desires change; install or overhaul plant, swift and clean operator; anywhere west of Rockies, B. C. or Alaska; strict abstainer; excellent references and testimonials. E 392.

**MACHINIST-OPERATOR** desires change; fast, clean operator and A-1 machinist; sober and reliable, married, union. E 63.

**SIMPLEX OPERATOR** on daily paper; or, can make excellent offer to good printer and wife, if latter is Simplex operator. **DISPATCH PUB. CO.**, Juneau, Alaska.

**WANTED**—First-class Linotype operators for high-grade book work; steady position; union. E 380.

**WANTED**—One or two Linotype operators; union, 8 hours, day work; minimum \$19 for 4,500 an hour, liberal bonus over 5,000; newspaper work. E 370.

**Proofroom.**

**WANTED**—Proofreader experienced on high-class book work; good salary and steady employment. E 38.

**Miscellaneous.**

**WANTED**—An experienced news ink maker to take full charge of small modern plant; good wages, permanent position. E 357.

**WANTED**—Young man thoroughly familiar with the poster business; for one who can estimate and sell the goods we have a very desirable opening. E 386.

**SITUATIONS WANTED.**

**DO YOU WANT HELP FOR ANY DEPARTMENT?** The Inland Printer Employment Exchange has lists of available employees for all departments, which are furnished free of charge. The following are now listed with us, seeking employment: Pressmen, 9; stereotyper, 1; Monotype operators, 2; ad-men, 3; proofreaders, 4; inkmaker, 1; photoengravers, 3; job-printers, 12; stonemen, 3; artist, 1; cartoonist, 1; editors and reporters, 6; bookbinders, 5; superintendents and foremen, 17; all-round men, 8; make-ups, 5; advertising and business managers, 3; Linotype operators, 13; machinist operators, 11; Linotype machinists, 6. **THE INLAND PRINTER COMPANY**, Chicago.

**Composing-room.**

**JOB COMPOSITOR**, first-class, used to handling the better grade of composition, no booze, industrious, wants position with reliable firm. E 383.

**PRINTER**—All-round, job, stone, composition, read proof; take charge; East preferred. E 395.

**Foremen.**

**GENTLEMAN**, with a thorough knowledge of all branches of printing, lithographing and bookbinding, desires position as superintendent, estimator or salesman with reliable house; good salary expected in return for conscientious services. E 365.

**WANTED**—Position as superintendent or foreman in California; a man of wide experience in the mechanical departments of Chicago's largest printeries is going to locate (on account of wife's health) on Pacific Coast; high-class references. H. F. HARRISON, San Fernando, Cal.

**Manager.**

**OFFICE MANAGER**, who can estimate accurately, with a thorough system for keeping track of work and costs, desires to make a change; has valuable acquaintance with large New York buyers, and can give best of references. E 373 New York office **THE INLAND PRINTER**.

**Operators and Machinists.**

**WANTED**—Position on Linotype by good printer; speed 3,500 per hour; desires position where he could work on Linotype most of the time to acquire speed; steady and reliable, strictly temperate, uses no tobacco, union. E 129.

**WANTED SITUATION** as Linotype machinist by young man of good habits; any model of machine; can operate some; references. E 189.

**Pressroom.**

**DESIRES CHANGE**—Competent cylinder pressman, A-1 on half-tone, catalogue and three-color work; capable of taking charge; results guaranteed; married. E 375.

**Salesman.**

**SALESMAN**—Man who has held responsible inside position as manager of New York office desires to take up outside work where he will be given some work to look after in connection with what he can bring; can estimate accurately, and thoroughly familiar with all branches of the business. E 374, New York office **THE INLAND PRINTER**.

**Miscellaneous.**

**WANTED**—Position by woman with several years' experience in general newspaper work; is interested in advertising. E 382.

**Purchase.**

**WANTED**—Linotype machine, one or two letter, good condition. Address, giving number and full particulars, **DAILY MINING RECORD**, Denver, Colo.

**WANTED**—Secondhand Linotype mats, 6, 10 and 11 point. **NEWS**, St. Johns, Mich.

**WANTED TO PURCHASE** at a bargain for cash, small modern printing plant, also Linotype machine; in replying furnish detailed statement stating makes, sizes and age of machinery, type, etc. M. J. GRIGG, 717 Howard st., San Antonio, Texas.

**WILL BUY** single-letter Linotype machines from publishers or printers who contemplate renewing plants with two-letter and more modern machines. M. A. J., 25 E. 14th st., New York city.

**WANTED TO PURCHASE.**

**WANTED**—15 by 18 sheet feed Harris press; state lowest price and condition. E 396.

**MISCELLANEOUS.**

**A COLD SIMPLEX STEREOTYPING OUTFIT**, \$17 and up, produces the finest book and job plates, and your type is not in danger of being ruined by heat; simpler, better, quicker, safer, easier on the type, and costs no more than papier-maché; also two engraving methods costing only \$5 with materials, by which engraved plates are cast in stereo metal from drawings made on cardboard; "Ready-to-use" cold matrix sheets \$1. **HENRY KAHRS**, 240 E. 33d st., New York, N. Y.





Taken entirely apart with the fingers in a few seconds.

**W**HAT task in the pressroom is more disagreeable, and looked upon with more disgust, and is more shirked, than the cleaning of the old-style jobber fountain? And, no doubt, with good reason, too. It almost seems as if the machinists who built it not only did not understand the pressman's requirement, but either conspired to make it a difficult task or totally overlooked the fact that frequently it would be necessary to take it apart. Then when it has become so foul as to utterly refuse to work, it is attacked with screw-driver and monkey-wrench. After the washup comes the difficulty of readjusting, which, with jumping pawl and changing impression, is no trifling matter either. Fortunately, indeed, if the jobber is not kept out of commission for several hours.

**NOT SO WITH THE NEW CENTURY.** The whole operation of taking apart and cleaning and putting together again (and that without wrench or screw-driver) under no circumstances need exceed five minutes. And, after putting together, there is absolutely no readjusting, as the adjustment has not been disturbed in the cleaning. It is ready for operation the instant the washup is completed. **MORAL:** Make money by equipping your jobbers with the NEW CENTURY.

**FOR ALL SIZES CHANDLER & PRICE, CHALLENGE, AND ALL GORDON PRESSES.**

Get a descriptive circular from your dealer or from us. **The WAGNER MFG. CO., Scranton, Pa.** Always specify your presses.

**I** AM pleased with the fountain. In the matter of taking apart and cleaning it is 'way ahead of them all. **W. C. GRISWOLD, Centerbrook, Conn.**

#### MISCELLANEOUS.

**ANYBODY CAN MAKE CUTS** with my simple transferring and etching process: nice cuts from prints, drawings, photos, are easily and quickly made by the unskilled on common sheet zinc; price of process, \$1; all material costs, at any drug store, about 75 cents. Circulars and specimens for stamp. **THOS. M. DAY, Box 1, Windfall, Ind.**

**PLAIN TYPOGRAPHY**—fifty commercial specimens, 60 cents, while they last. **EDWARD STUTES, Spokane, Wash.**

**PRINTERS** everywhere find the producing of imitation typewritten letters a most profitable side line. Ours is the leading circular letter firm in Chicago, printing millions of letters weekly on our platen and Harris presses. We make our own inks and typewriter ribbons, and guarantee perfect work in every way. Full instructions for operating the process furnished all users of our supplies. No apparatus of any kind required, and no royalties. Prices: Ink for circular letter printing, per lb., any color, black, blue, green, purple, brown or red, per lb. \$2.50. Typewriter ribbons exactly matching, per dozen \$4.00. Special prices to large users.

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**OUR COLOR DESIGNS FOR PRINTERS' BLOTTERS** are building business for those who use them. Only one shop in a town can get them. Write for samples and particulars. **CHAS. L. STILES, Printers' Cuts, Live Stock Cuts, Poultry Cuts, COLUMBUS, OHIO**



**SPATULA CUT CATALOGUE** (7th ed.). Thousands of beautiful and appropriate half-tone and line cuts for ads, booklets, etc. Over 100 pp., 9 1/2 x 12 1/2, 50c. (refunded on \$2 order). **BEAUTY BOOK**—Full-page art pictures from photos of 60 of the most beautiful women in the world, 26c. Electros for sale. Both 70c. Stamps taken. **SPATULA PUB. CO. 100 Sudbury Building BOSTON, MASS**

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Is the Standard Method for producing Imitation Typewritten Letters. Complete outfit costs \$10.00. Send for samples.

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Our new price folder: It's printed on stiff cardboard, with a hole punched in it to hang up for future reference. You'll take it down from the peg often enough to consult for price and also on carbon papers for pen, pencil and typewriter. Don't fight shy of manifold duplicating work. It's profitable, and no trouble, providing you have suitable carbon paper. The folder makes the carbon situation clear, tells how to purchase economically. We also include a liberal line of samples.

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No over or under production when your machines are equipped with

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They count at the profit end.

Ask your dealer or write for catalog.

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**The Universal Wire Loop**

Is the cheapest and best device for "Stringing" Catalogs, Directories, Telephone Books, Prices Current, etc.

**Look Better and Won't Break or Wear Out.**

Let us send sample and quote you prices.

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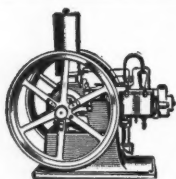
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**PRINTERS** Write on your business letter-head to  
**R. Carleton Engraving Co.,**  
Omaha, Neb., for the latest copy-  
right **LODGE CUT CATALOGUE**—  
Book, "When Papa Rode the Goat." Colored plates. 100 illustrations. Many fearful things. 15c. by mail, to printers only.



### THE MIETZ & WEISS OIL ENGINES

Marine, 1 to 100 H.P. Stationary, 1 to 70 H.P.

Operated by common kerosene oil. Automatic in operation, absolutely reliable and uniform in speed. Especially adapted to operating printing presses and Linotype machines. Does not affect rate of insurance.

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**The VAN BIBBER ROLLER CO.**

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**WE MAKE THE BEST THAT CAN BE MADE**

We use the latest up-to-date **GATLING GUN** system in casting, with the finest steel moulds, and make solid, perfect rollers by the best formulas.

Established 1868. Cincinnati is sufficient address in writing or shipping.



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Have you a patentable idea, and do you need expert advice or assistance in developing it? If it is a question involving procedure in securing a patent, novelty or mechanical construction of your invention, consult us. Expert opinions will be rendered, patent office or working drawings executed, legal advice given, and applications for patents made by reputable specialists in typesetting, printing, binding and like machinery and appliances, in the graphic and allied arts. All matters strictly confidential.

**John S. Thompson & Co., 130 Sherman St., Chicago**

References: **THE INLAND PRINTER Co., Chicago; HILL & HILL, Patent Attorneys and Mechanical and Electrical Engineers, Monadnock Building, Chicago; R. B. MACINTOSH & Co., Mechanical and Consulting Engineers, 130 Sherman Street, Chicago; W. H. SCHUYLER, Expert Machinist, 130 Laflin Street, Chicago.**

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For Padding and Bookbinding are made of good materials and do good work. For prices, write **ROBT. R. BURRAGE, 83 Gold St., NEW YORK**



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IF YOU USE

### Stewart's Embossing Board

**SIMPLE**

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Sheets, 6 x 9 inches. 80 cents a dozen, postpaid.

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## ROTH MOTORS



This cut shows six C. & P. Job Presses and an "Optimus" Cylinder Press driven by

**ROTH MOTORS**

SOLD BY

**Barnhart Bros. & Spindler**

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TWELVE DISTINCT MODELS FOR PRINTERS EXCLUSIVELY

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Number While You Print — Perforate While You Print

They all work together, or separately

## Bates Perforating Machines



MODELS 45 AND 46 COMBINED

Our Model No. 50 Six-Wheel Hand Numbering Machine is absolutely the BEST on the Market.

See our Model No. 47 Automatic Dating Machine



Nº 12345  
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**Model No. 27**  
For General Use  
—  
5 Wheels  
—  
Made to Number Backward or Forward

**THE BATES MACHINE CO.** { 346 BROADWAY, NEW YORK CITY  
315 DEARBORN ST., CHICAGO, ILL.  
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## STEEL AND COPPER PLATE ENGRAVING MACHINES

The latest improved and most up-to-date. Pantograph Engraving Machines, especially adapted and designed for engraving cycloid ruling, tints for checks and bonds, lettering, etc. Steel and Copper Plate Ruling Machines for making all styles of ruling; straight, waved, circular and radiated. Guaranteed to do accurate work. Highly endorsed by all leading bank-note engravers.

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Patentees of Pantograph Engraving Machines, used by all the print-works throughout the United States and Canada. This machine has been remodeled and includes all the latest improvements to facilitate and simplify the engraving of copper rolls.

## STEEL CYLINDERS FOR EMBOSING PURPOSES

Illustrated and descriptive circulars sent on application. Please mention this paper.

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Can be fastened with the fingers, but key and pierced nuts are now furnished, and no extra charge.

Screws right on to the tympan and not through it. Saves the tympan instead of destroying it. Allows form to be printed directly over the spot where it was previously fastened. Any degree of adjustment. Absolute hold without glue or pin-points. Sheets can not feed under gauge head.

Send for description of Megill's Gripper Fingers, Gripper Cross-bars and Automatic Machines for setting sheets to perfect register on the job press.

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BRIGHT  
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(SEE INSERT, APRIL, 1905)

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Not made for anything but Plated and Coated Stock.

Careful printers using this Gold Ink on Plated and Coated Stock can do work equal to Dry Bronzing. Printed specimens furnished on application.

Rich Gold, . . . \$3.00 per lb.  
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Copper, . . . 3.00 ..  
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Put up in  
½ and 1 pound  
tin cans.

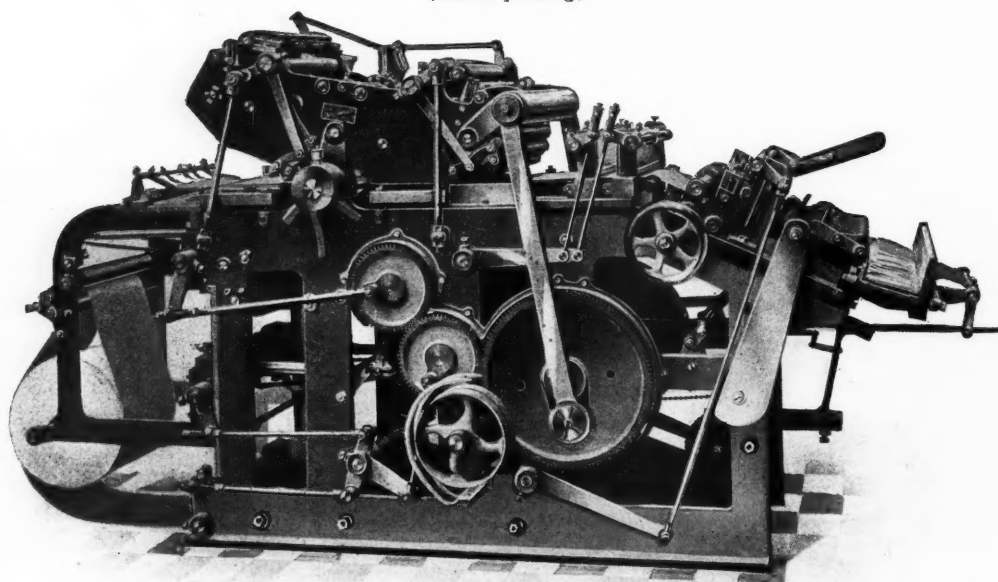


**T. RIESSNER**  
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# The WAITE Counter Check Book Machine

(Patent pending)



¶ The Waite Counter Check Book Machine has been adopted by the largest printers of Counter Check Books in Great Britain as it is acknowledged to be the most perfect machine ever designed for Counter Check Book work.

¶ **CAPACITY OF MACHINE**—The machine prints from the roll, from *flat forms*, and delivers 10,000 to 12,000 sheets per hour—*fully printed, paged on both sides, perforated and folded*. The machine pages from 1 to 50 or from 1 to 100. The completed pages are delivered counted and *collated*.

¶ We propose to sell the use of these machines for the term of the patents, with exclusive City, County or State rights, as may be agreed upon. The price of machine is \$6,000, and a royalty of \$500 per annum.

¶ Special arrangements will be made with Department stores for machines to do their own printing only.

¶ *The purchaser of a Waite Counter Check Book Machine will be able to control the trade in his section and make a large profit; and beyond this, being able to supply Counter Check Books will secure him the entree into every business house.*

¶ The Waite Counter Check Book Machine turns out the highest grade of printing, and prints invoices of various sizes, according to the width of roll-paper used.

¶ The Waite Counter Check Book Machine prints from flat forms, so there is no need of curved electros or stereotypes; ordinary type-forms can be used.

¶ The Waite Counter Check Book Machine can be seen working at our warerooms:

**Toronto Type Foundry Co., Ltd.** 70 AND 72 YORK STREET  
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Phone... 1212 Harrison

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## All Printers' Necessities

Since the San Francisco fire we have shipped thousands of pieces of our Combination Chase for the re-equipment of offices there. Isn't it worth while to look into the matter? They are labor-savers!

We shall shortly be able to take better care of you on Keystone Type than ever. Larger stock. Complete line of sorts.

Our customers say we give better service than they get elsewhere

## Champlin Type & Machinery Company

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*Printing, Embossing, Cutting, Scoring*

Better distribution by one rolling than from two rollings by any other.

Automatic Safety Guard — absolute protection to the hands.

Automatic Stop Motion.

Roller Carriage operated WITHOUT CAM in main gear wheel.

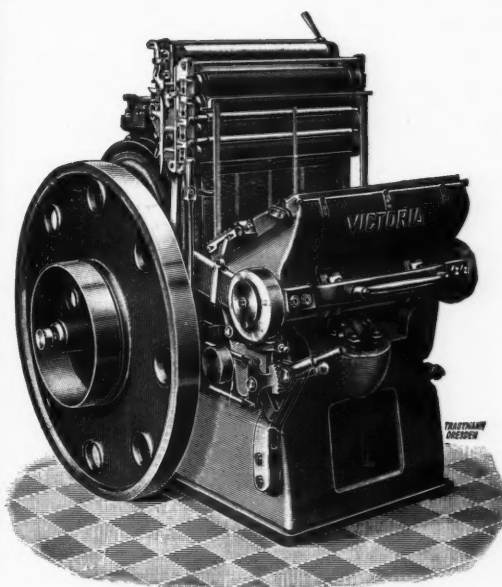
Instant Throw-off and separation of all inkers, distributors and cylinders.

Friction Clutch.

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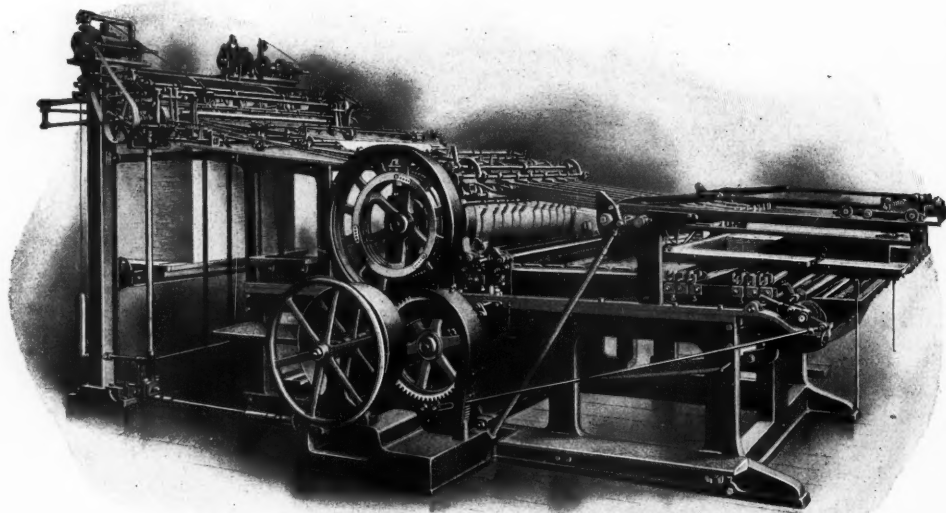
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No. 5 Special Model

"I should consider the Victoria press comparatively cheap at double the price charged for any other of the Universal type."  
A. KOHLENBERG, Manager, *Mulford Press.*

# Fuller Folders *and* Feeders

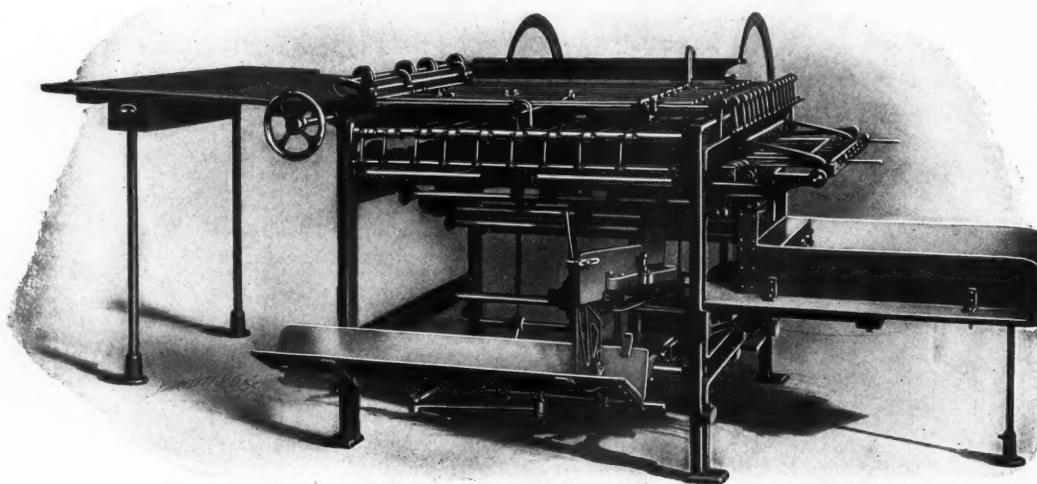


## FULLER AUTOMATIC FEEDER FOR PRINTING PRESS

We guarantee an increase in production of ten to twenty-five per cent over hand feeding, absolutely perfect register and a saving in wastage of paper.

We make Automatic Feeders for all kinds of machines designed to handle paper in sheets.

*THOUSANDS IN SUCCESSFUL OPERATION.*



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Handles sheets from 12 inches by 16 inches to 38 inches by 50 inches in any weight of paper without wrinkling or buckling. Folds and delivers 8, 12, 16, 24 and 32 pages. Book or Periodical Imposition. Also long 16's, 24's and 32's two or more "on."

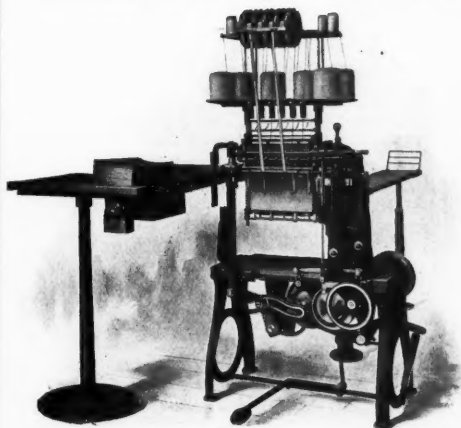
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CHICAGO

**E. C. FULLER COMPANY**  
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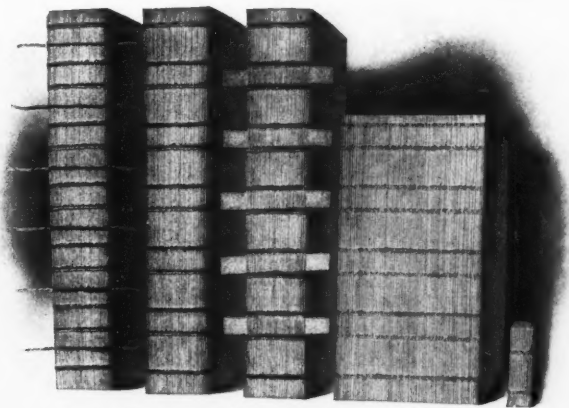
FACTORY  
BROOKLYN, N. Y.



# The Smyth Book-Sewing Machines



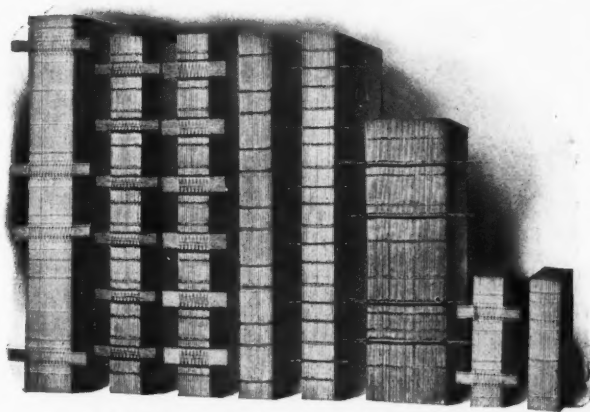
No. 3



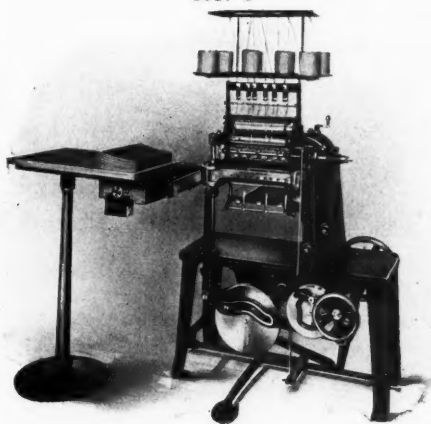
Various styles of sewing done on No. 3



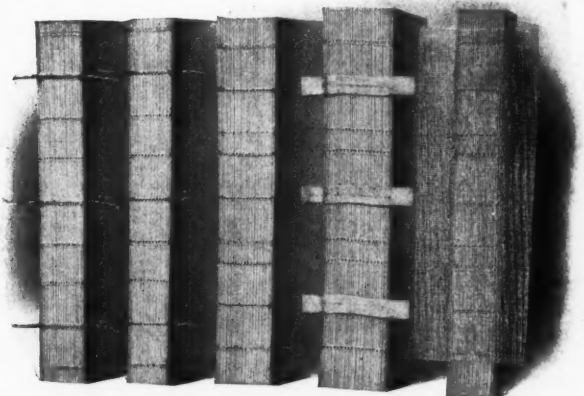
No. 4



Various styles of sewing done on No. 4



No. 7



Various styles of sewing done on No. 7

*Used in every country in the world where books are made. Write for descriptive Catalogue.*

SOLE SELLING AGENTS

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# PROCLAM

## MONOTYPE PRIZES

### Know all men by these Presents:

**THAT** those who are fortunate enough to be Operators of MONOTYPE Machines, or Foremen over the Operators of MONOTYPES, or Owners of the aforesaid Type Making and Setting Machines, are HEREBY NOTIFIED that they are to be given a renewed incentive to display their skill in the management of this remarkably profitable contrivance.

**THAT** henceforth, and until further notice, there shall be offered in prizes each month the sum of Ninety Dollars (\$90).

**THAT** of this sum a third shall go to the Keyboard Man, a third to the Caster Man and a third to the Foreman—all to be in accord with the things hereinafter mentioned.

**THAT** to the owner who lends good countenance and encouragement to those of his men who wish to show themselves to be skilful and clever, and more valuable than their fellows, extraordinary benefits shall come. (The profit of his business, always directly dependent upon the celerity, exactness and economy of his output, should at once expand under the stimulus by this contest applied.)

**THUS**, in the hearty co-operation of all to exact from the MONOTYPE the last farthing of its earning power, and the highest qualities of its nature, lies the interest of every man.

**AND WE**, knowing the MONOTYPE a trusty weapon, do now fearlessly thrust it into the heart of things.

## WOOD & NATHAN

1 Madison Avenue

THE MONOTYPE

June 20, 1906

# AMATION



## PRIZE CONTESTS

### THE CONTESTS: There Shall Be as Follows a Series of Three Each Month:

**Class A**—For the BEST RECORD OF SPEED, a prize of \$30, divided as follows: to the Keyboard Operator, \$10; to the Caster Operator, \$10; to the Foreman in charge, \$10.

**Class B**—For the BEST RECORD OF PROFIT-MAKING, \$30; to the Keyboard Operator, \$10; to the Caster Operator, \$10; to the Foreman in charge, \$10.

**Class C**—For the BEST RECORD OF RANGE OR SCOPE, \$30; to the Keyboard Operator, \$10; to the Caster Operator, \$10; to the Foreman in charge, \$10.

SERIES 1 shall close upon July 31, 1906, when shall be taken up for comparison all of the records received during that month.

SERIES 2 shall close upon August 31, 1906.

AND, thereafter, until further notice, a series of contests in conformity herewith shall close upon the last day of each month.

EACH RECORD offered in competition must be clearly described. With it must be furnished as samples two (2) printed copies of the work, and a clearly written statement setting forth the facts, signed by the foreman in charge, and countersigned by a proprietor of the office in which it was done.

NO RECORD may twice be offered in the same class.

IN MONOTYPIT and in the trade papers, monthly, shall be published the Names and Portraits of Winners, with detailed accounts of their achievements.

WORKMEN often do more than their employers are aware of, and foremen, in the management of their forces and appliances under their control, frequently display a degree of generalship little understood by those for whom they work.

THEREFORE, in addition to the advantages of increased output, it being to the interest of the Owners of Plants to know who are their good men, and the extent of their talents, these contests should have for workman, foreman and owner a value which can not be gained in any other way.

OUR MONTHLY MAGAZINE, MONOTYPIT, which is devoted to Machine Composition and Fun, will interest all those who may wish to participate; and the Printing Trade at large will find in it full accounts of the contests and other information of great worth to those who find it necessary to keep up with the times. Monthly it is sent free to all who may have registered their names and addresses.

ACO., Selling Agent  
MONOTYPE

NEW YORK CITY





**Use the  
Star Brand  
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Printing  
Inks.**

**Red Star Label.**

# Star Black

The best all-round Book and Cut Ink on the market to-day. Made in three grades—Regular, Long and Q. D., all the same high quality.

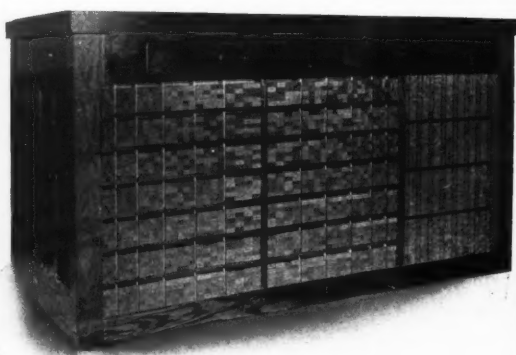


**F. A. BARNARD & SON**  
349 Dearborn Street, Chicago, Ill.

1871

35 YEARS

1906



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We manufacture a full line of **WOOD GOODS**, and some of the very finest composing-rooms in the U. S. are equipped with our "Compact" Furniture.

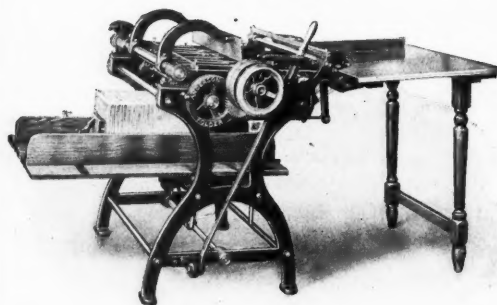
We never have been connected with any trust or combine.

Write direct to the factory for Catalogue and Prices.

**THE JAMES E. GOODRICH CO.**  
GENEVA, OHIO, U. S. A.

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ONE FOLD



SPEED **6000** PER HOUR

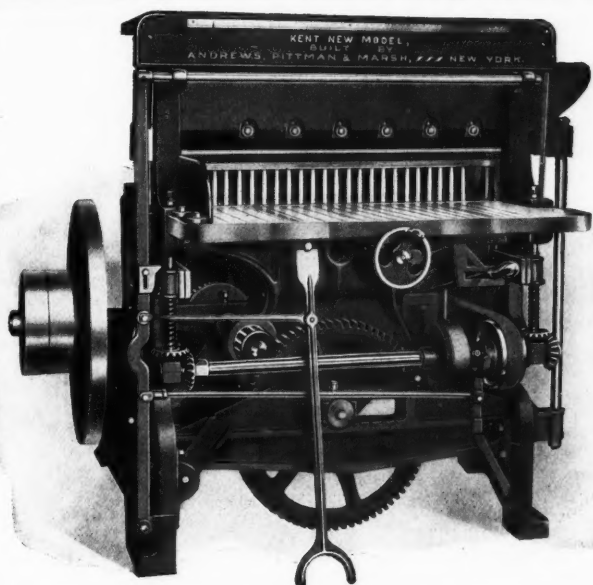
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**C. F. ANDERSON & CO.**

394 - 398 SOUTH CLARK STREET  
CHICAGO

# Kent Power Paper Cutters and Die Presses

*"The machines that have made good for thirty years and are still the leaders"*



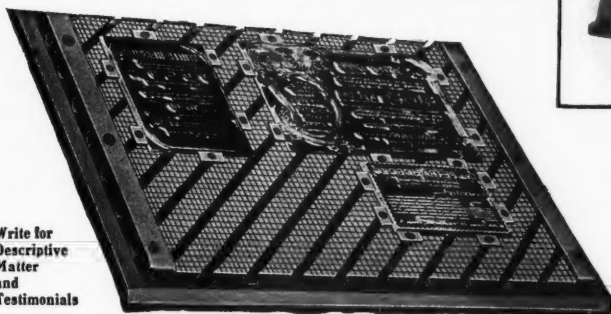
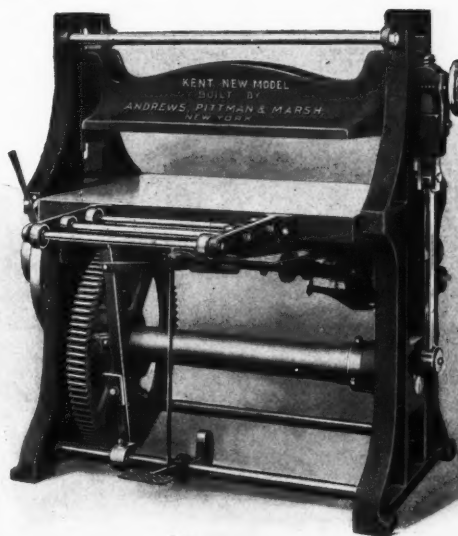
## Kent Power Paper Cutters

are the strongest and most powerful cutters built, fast and easy in operation, *do not break or get out of order*, the machines you can rely on every day in the year.

The material used in these machines is the best that can be procured, and no attempt has been made to economize in metal. The Paper Cutters are fitted with the Independent Automatic Self-Clamping Attachment, that gives the operator complete control of the clamp at all times, and is so powerful that there is absolutely no possibility of the paper slipping or skewing when under the knife.

## The Die-Cutting Presses

are simple and powerful in construction and noiseless in operation, readily adjusted and practically indestructible. There are more Kent Die-Cutting Presses in operation than any other made.



Write for  
Descriptive  
Matter  
and  
Testimonials

We are still making a specialty of Patent and Register Blocks. Our

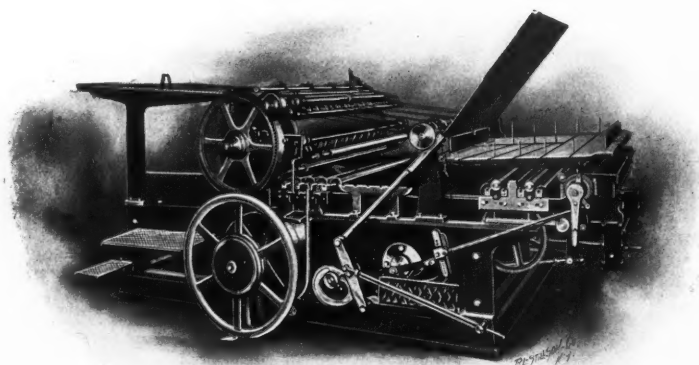
## Ideal Iron Grooved Blocks

with the Patent Tip-in Hook, are in constant demand and are giving universal satisfaction to all users.

**ANDREWS, PITTMAN & MARSH,** 286 GREENWICH STREET  
NEW YORK

# Press Economy

SOME have the idea that economy consists in buying the cheapest press to be had, without regard to the quantity and quality of the work it will do; but with the wise buyer first cost is a secondary consideration.



## The Whitlock Press

Is the choice of the discriminating purchaser, for in it he secures a press that will turn out first-class printing at a profitable speed and at small expense for operation. This is true press economy. The price is reasonable, too.

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FOR CIRCULARS, PRICES, ETC., WRITE

**THE WHITLOCK PRINTING  
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A complete dictionary for the buyer of Printers' Papers, giving alphabetical classification of all printers' papers sold in Chicago, Milwaukee, Duluth, Superior, Minneapolis and St. Paul, with catalogue list prices on same.

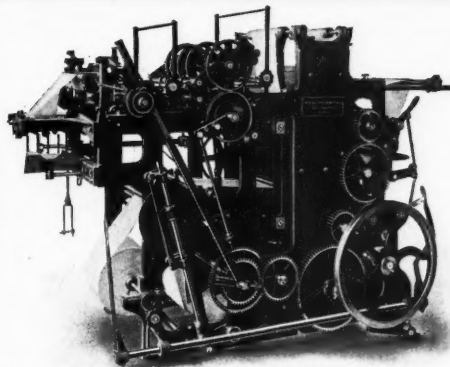
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**WHAT IT IS.** Ink Regulator is a colorless oil that readily dissolves all fine lumps in any ink, thus making even a poor grade of ink do work that a better grade will not do without it. When we say any ink, we mean all colors and shades. Jobs on coated, S. & S. C., or any hard paper can be backed and handled without off-set in from ten minutes to one hour without spreading to dry. **GIVES STRONGER COLOR.** Inks mixed with Ink Regulator have a stronger color after drying. Ink Regulator has a double value—it both reduces and dries almost immediately, at same time press can stand over night and start without wash-up, especially with black ink.

**OLD INKS CAN BE SAVED.** All inks that may be considered too old or dry and otherwise would be thrown away, can be mixed with INK REGULATOR and used on the same job with new inks without seeing any difference.

**INKS WILL NOT CURDLE OR CLOUD** when mixed with INK REGULATOR, even if extremely thin.

**SAVES PAPER.** Many a job has been rejected because of off-set or it took too long a time to deliver, because the ink wouldn't dry. No slip sheeting needed.

**BY WORKING INK REAL THIN** with INK REGULATOR two rollers will give as good distribution as four will ordinarily do. **IN COLD WEATHER** presses can be started immediately by having ink mixed fairly thin.

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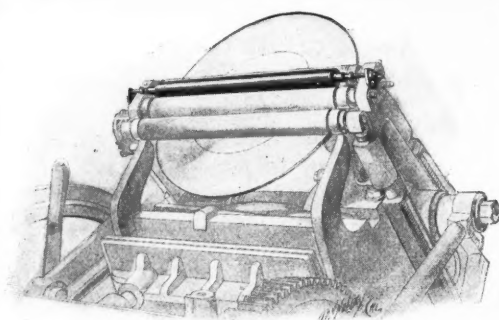
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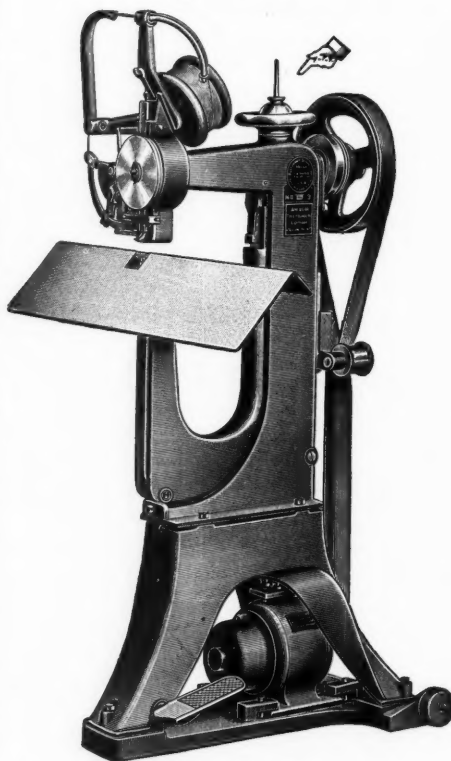
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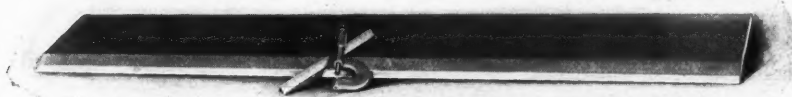
40	41	42	43	44	45	46	47	48	49	50
1.20	12.71	13.02	13.33	13.64	13.95	15.64	15.98	16.32		
22	13.98	14.32	14.66	15.00	15.34	17.20	17.57	17.95		
	14.61	14.95	15.29	15.63	15.97	17.98	18.36	18.77		
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	26	15.12	15.48	15.84	16.20	17.94	18.33	18.72	19.10	
	27	16.63	17.02	17.42	17.82	19.73	20.16	20.59	21.01	
	28	17.79	18.21	18.64	19.06	20.62	21.07	21.52	21.97	
	29	18.56	19.00	19.44	19.86	21.52	21.99	22.46	23.00	
	30	18.06	18.48	18.90	19.32	20.70	21.15	21.60	22.00	
	31	20.32	20.79	21.24	21.74	22.77	23.26	23.76	24.25	
	32	21.24	21.74	22.16	22.68	24.16	24.32	24.84	25.20	
	33	22.68	23.08	23.63	24.08	24.84	25.37	25.92	26.40	
	34	21.60	22.00	22.40	22.80	25.87	26.42	27.00	27.50	
	35	21.60	22.00	22.40	22.80	23.00	23.50	24.00	24.50	
	36	25.30	25.85	26.40	26.95	25.30	25.85	26.40	26.95	
	37	25.45	27.03	27.60	28.15	27.60	28.20	28.80	29.35	
	38	27.60	28.20	28.80	29.35	27.60	28.20	28.80	29.35	
	39	29.35	29.95	30.55	31.15	29.35	29.95	30.55	31.15	
	40	29.35	29.95	30.55	31.15	29.35	29.95	30.55	31.15	

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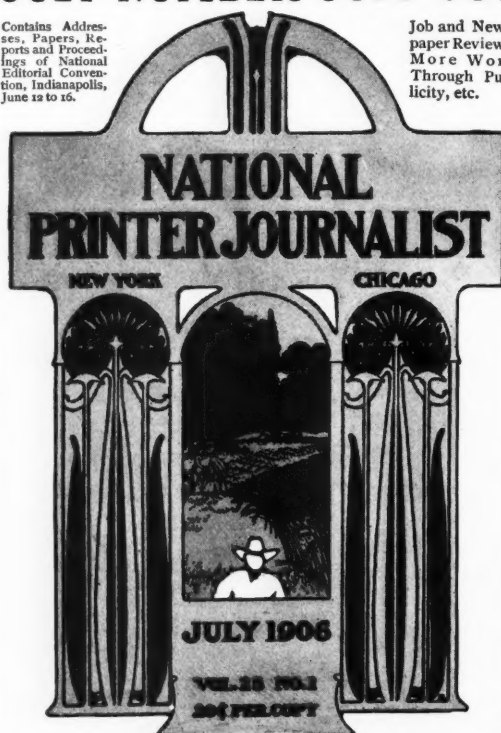
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Insertions in this Directory are charged \$7 per year for two lines; more than 2 lines, \$2 per additional line.

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## ADVERTISING FANS.

CRESCENT EMBOSING Co., Plainfield, N. J. See "Crescent Goods."

## ADVERTISING NOVELTIES OF WOOD.

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NORTH-WESTERN NOVELTY Co., Geneva, Ill.

## AIR BRUSH.

THAYER & CHANDLER, fountain air brush, 160 W.



Jackson blvd., Chicago. Send for catalogue.

## BALL PROGRAMS AND INVITATIONS.

BUTLER, J. W., PAPER Co., 212-218 Monroe st., Chicago. Ball Programs, Folders, Announcements, Invitations, Tickets, Society Folders, Masquerade Designs, etc.  
CRESCENT EMBOSING Co., Plainfield, N. J. See "Crescent Goods."

## BOOK STAMP ENGRAVERS AND DIE SINKERS.

STARK & SELIG, 458 W. Broadway, New York.

## BOOKBINDERS' MACHINERY.

HICKOK, W. O., MANUFACTURING Co., Harrisburg, Pa. Ruling machines, bookbinders' machinery, numbering machines, ruling pens, etc.  
ISAACS, HENRY C., 10-12 Bleecker st., New York.

## BOOKBINDERS' LEATHER AND CLOTH.

THOMAS GARNAR & Co., manufacturers, 181 William st. and 22 Spruce st., New York.

## BOOKBINDERS' SUPPLIES.

SLADE, HIPP & MELOY, Inc., 139 Lake st., Chicago. Also paper-box makers' supplies.

## BRASS RULE AND BRASS GALLEYS.

HAMMOND PRINTERS' SUPPLY Co., 45 Eddy st., Providence, R. I. Discount, 40 per cent.  
WANNER, A. F., & Co., 298 Dearborn st., Chicago. Makers of all styles of Brass Rule, Printers' Specialties.  
WESSEL, F., MANUFACTURING Co., 70 to 80 Cranberry st., borough of Brooklyn, and 10 Spruce st., N. Y. city; 150 Franklin st., Chicago; 124 South 8th st., Philadelphia.

## BRASS-TYPE FOUNDERS.

MISSOURI BRASS TYPE FOUNDRY Co., Howard and Twenty-second sts., St. Louis, Mo. Exclusive Eastern agents, Keystone Type Foundry, Philadelphia, New York.  
WESTERN BRASS TYPE FOUNDRY Co., 3749 Texas av., St. Louis, Mo. New modern machinery and plant.

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CABOT, GODFREY L., Boston, Mass.

## CARDBOARD MANUFACTURERS.

CHAMPION COATED PAPER Co., Hamilton, Ohio.

## CASE-MAKING AND EMBOSING.

SHEPARD, THE H. O., Co., 120-130 Sherman st., Chicago. Write for estimates.

## CHARCOAL FOR ENGRAVERS.

ATLANTIC CARBON WORKS. Prepared charcoal. E. 40th st. and E. Brdwy., Brooklyn, N. Y.

## CHASE MANUFACTURERS.

BARNHART BROS. & SPINDLER, 183-187 Monroe st., Chicago. Sole manufacturers of Silver Gloss Steel Electric Welded Chases.

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STRUPPMANN, C., & Co., 78 5th av., New York.  
STARK & SELIG, 458 W. Broadway, New York.

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White, Corbin & Co., Rockville, Conn.  
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National Envelope Co., Waukegan, Ill.  
P. P. Kellogg & Co., Springfield, Mass.  
Whitcomb Envelope Co., Worcester, Mass.  
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### FOIL.

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KIENLE & Co., Walton av. and 144th st., New York. Manufacturers of lithographic and printing inks.

RAT, WILLIAM H., PRINTING INK MFG. Co., 735-7-9 E. 9th st., New York.

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ULLMANN & PHILPOTT MFG. Co., THE, office and works, 89-95 Mervin st., Cleveland, Ohio.

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BARNHART BROS. & SPINDLER, 183-187 Monroe st., Chicago.

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### MACHINERY.

BARNHART BROS. & SPINDLER, 183-187 Monroe st., Chicago. New rebuilt.

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BLATCHFORD, E. W., Co., metal for Lanston Monotype Machines, 54 North Clinton st., Chicago.

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GANE BROS. & Co., St. Louis, Mo. Foot and power machines, latest pattern, any style figure for paging and numbering. Send for cut, description and price for cash or on time.

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EARDLEY & WINTERBOTTOM, 125-127 Worth st., New York.

ISAACS, HENRY C., 10-12 Bleeker st., New York.  
MORGANS & WILCOX MFG. Co., Middletown, New York.

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—From "POINTS OF PRACTICAL VALUE."

**T**HERE seem to be some erroneous notions prevalent regarding the proper speed for a router spindle, so we think it may not be amiss to say a word as to our position on this important point.

Let us say at once, that the speed we *recommend* for our routers is not the maximum speed at which the spindle can be run, but about the best practical rate, when everything is taken into consideration.

In determining the proper speed for a spindle, we have to deal with three factors: The speed which the spindle itself will endure, the work to be performed, and the length of time the spindle will wear under given working conditions—that is, mechanics, service and economy. For present purposes, we can ignore the mechanical element, seeing that our spindles are so made that the rated speed can be very greatly exceeded with perfect safety to the spindle. It therefore remains to determine the point where the highest efficiency is combined with the greatest durability.

It is a mere truism to say that where there is friction from a moving surface there is wear; and that this wear increases with the speed. A router spindle, in common with everything else of the sort, begins to wear with the first turn it makes, but this wear is so gradual that it takes millions of revolutions to grind off the thousandth part of an inch. The process is greatly accelerated, however, with every increase of speed—that is, if a spindle running 15,000 r.p.m., after making fifty millions of turns, is found to be worn down .0001 inch, at 18,000 r.p.m. the same amount of wear would take place in much less than fifty millions of turns.

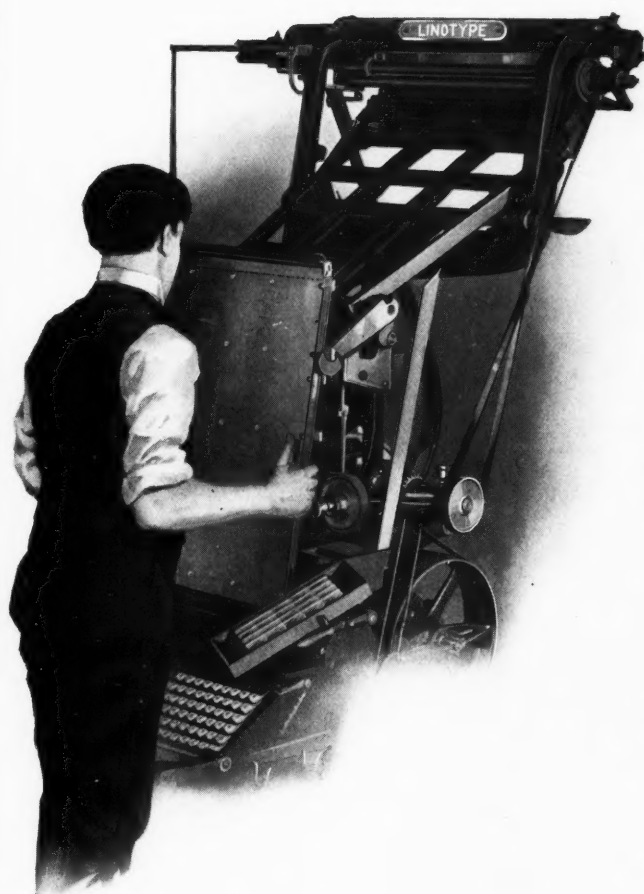
Now, if increasing the speed of the spindle increased the rate of work in anything like proportion, it might pay, simply as a measure of economy in labor, to drive the spindle at top speed and let it wear out, replacing it at frequent intervals. But this is not the case. As a matter of fact, at 15,000 r.p.m. the cutting capacity of the cutter exceeds the speed at which the operator can guide and control the plane movements of the head, on average work. In other words, when we go above 15,000 r.p.m. on average work, a large and increasing percentage of revolutions is wasted, so far as actual performance of work is concerned, the spindle simply turning about and doing nothing but wear itself out. In a word, all ordinary routing can be done as well and quickly at 15,000 r.p.m. as at a higher speed, and with much less wear on the spindle.

Experience has taught us this: that, save in rare instances, increasing the speed of a router spindle above 15,000 r.p.m. does not result in any corresponding increase in production, but does increase the rate of wear very perceptibly. To put it a little differently: When you go above the rated speed of our routers you do not get more work, but you do pay more for what you get.

But, let us make this plain: We do not dictate speeds, we only suggest them. Our router spindles will stand anything in reason, and if you have a notion that 15,000 r.p.m. is not fast enough, say so, when you place your order, and we will speed up your machine to meet your views.

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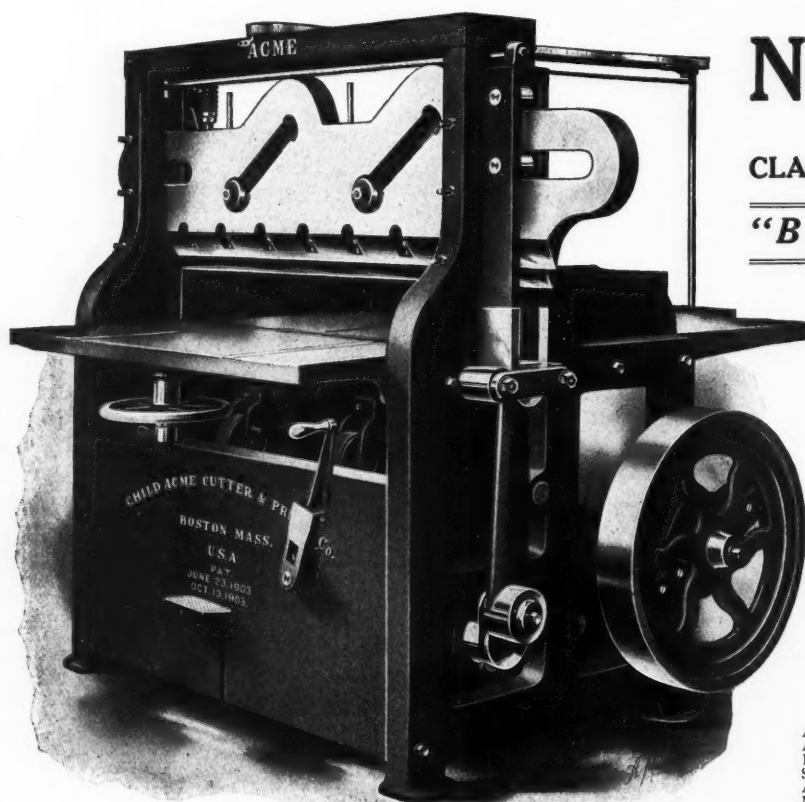
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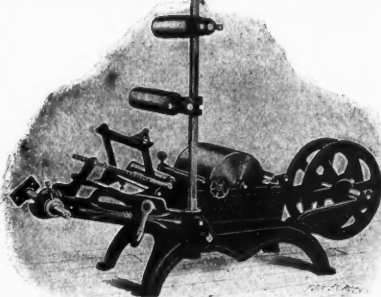
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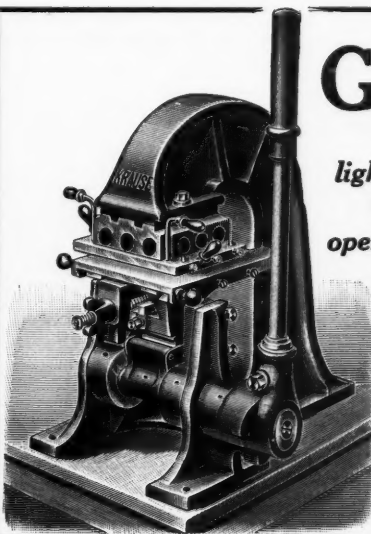
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*For  
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With  
open frame*

Code Word	No.	Blocking Surface	Bed	Space between center of Blocking Plate and Frame
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¶ As this press is *open on three sides* and as there is much space between center of blocking-plate and frame, the material may be much larger than the blocking surface. The machine is suitable for gilding book backs, velvet or satin ribbons and bows, neckties, hat linings, etc.

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# Williams' COMBINATION Rubber Furniture

PATENT NO. 272221

DOES AWAY WITH THIS OPERATION

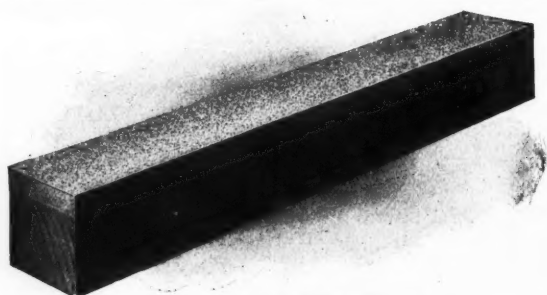


Illustration showing full-size 18-em piece.

So many employing printers complain for the reason that they have found no profit in their composing-rooms. This has been a complaint for years. Isn't it about time to find a remedy? Now that we have shorter working hours adds increased importance to this matter, and it is Tubbs' idea that the composing-room has been sadly neglected in the way of modern equipment since the time of printing.

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Little Rock, Ark.

March 29, 1906.

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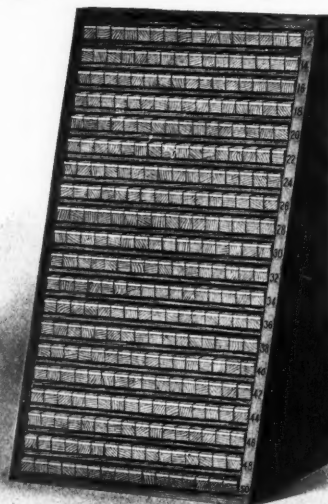
Gentlemen,—We have used the W. W. Williams Rubber-Faced Printers' Furniture during the past year. It has given splendid satisfaction and is one of the greatest economies that can be introduced into the make-up department of the composing-room of a printing-office. It answers with equal facility for both job and book work, as the principle is the same in both cases: that of keeping loose lines or quads and spaces from working up either on job press or on cylinder presses.

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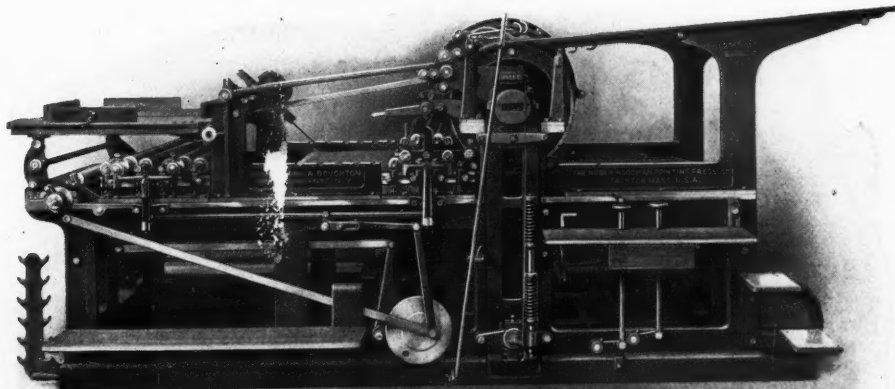
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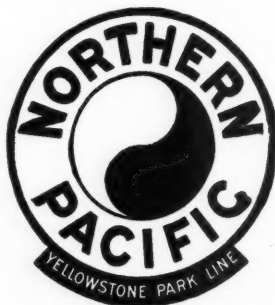
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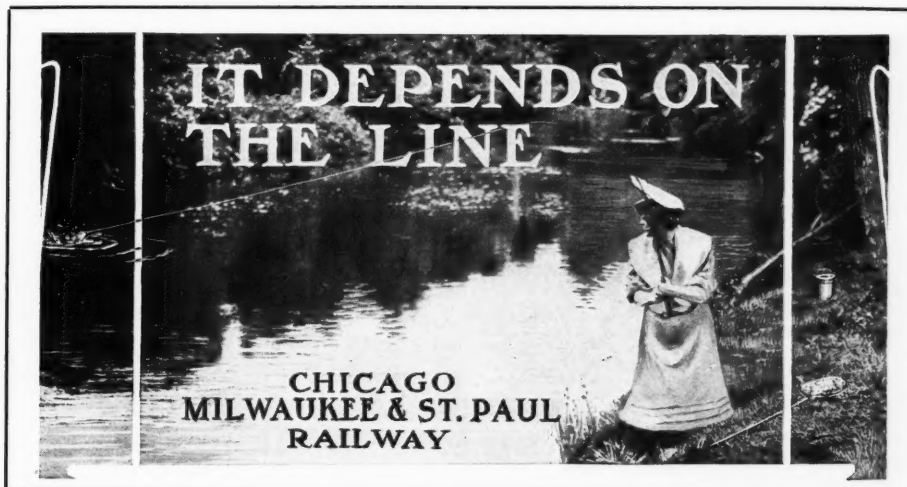
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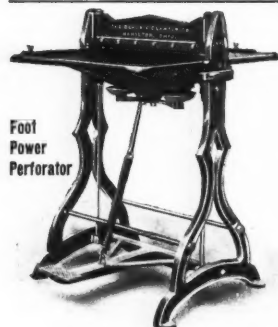
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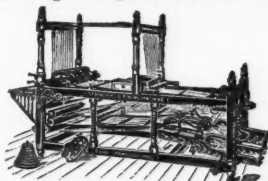
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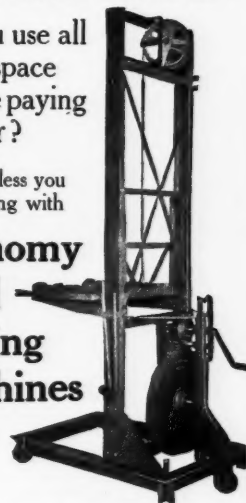
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